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**The influence of culture and religion on the capital
structure of SME – A pan European quantitative
research**

Doctoral Dissertation

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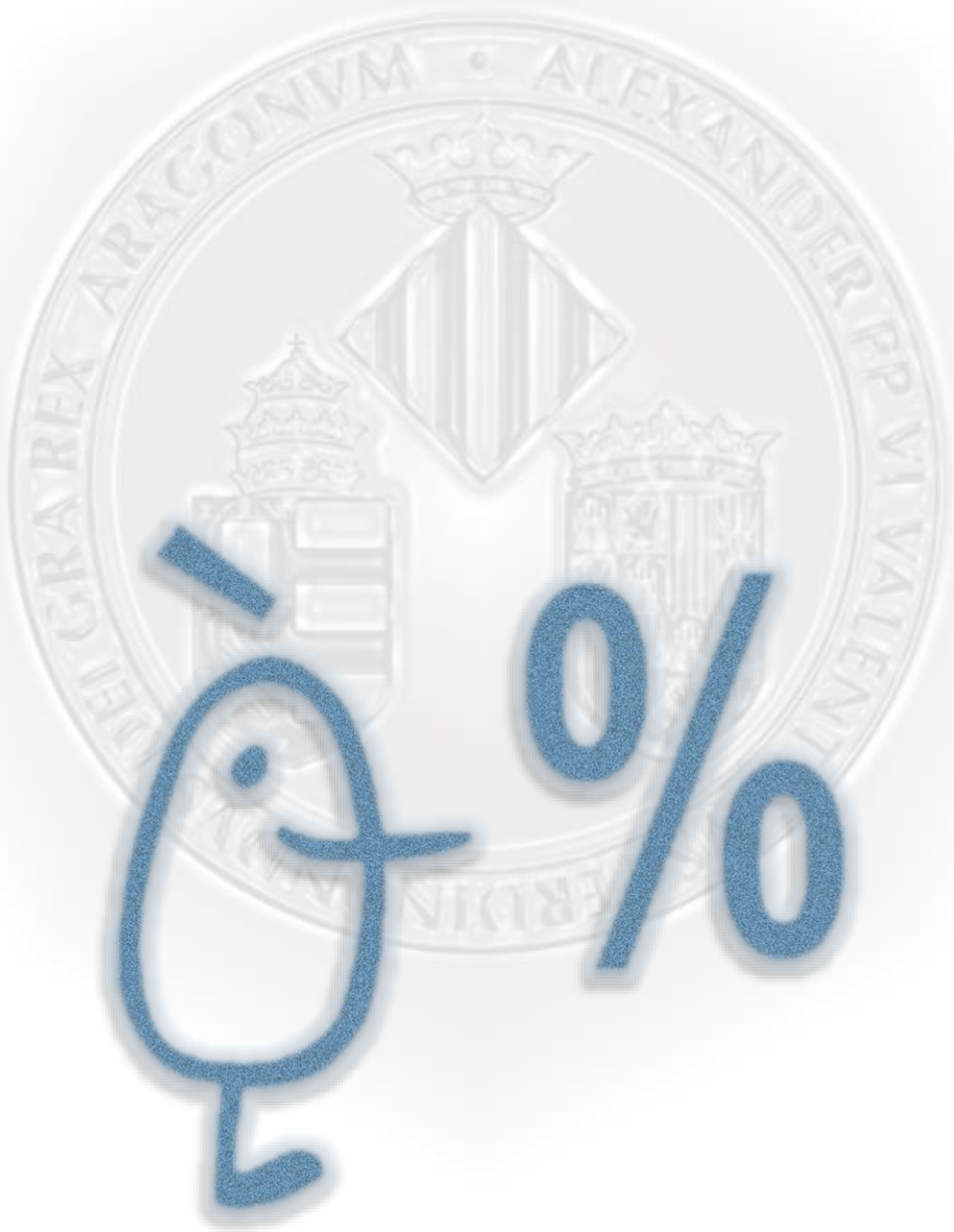


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ABSTRACT ENGLISH

Different finance theories have tried to explain the capital structure of companies considering it as a rational choice with limited results. In contrast, upper echelons theory highlights the influence of top managers' values and beliefs in the decisions of firms and the institutional theory complements this vision with the role of institutional values and norms in financial decisions and options. The research looks into the influence of cultural values and religious belonging in explaining why SMEs differ in their financial preferences aiming to fill the gap between rational finance theories and upper echelons proposal. Therefore, the present study uses the cultural framework from Hofstede (2021) and Christian belonging data from 24 European Countries and the two main Christian faiths to analyze their impact on the capital structure, specifically in their preferences between equity and liabilities. Furthermore, this study looks into the SME's risk-taking behavior and the cultural and religious impact on this issue. Through a database of 27.778 manufacturing SMEs from 24 countries of EU with financial information from 2015-2019 and using multilevel analysis, this study finds evidence that culture and religion influences the choice of capital within SMEs and impacts their risk-taking behavior. However, and in contrast to various previous researchers, who find a strong relationship between culture and religion and financial behavior within firms, the results show a very low size effect of culture and religion on the predicting directions of financial behavior.

Keywords: Capital Structure, Culture, Religion, Risk, SME

JEL Classification:

G32 Financial Risk and Risk Management

G32 Capital and Ownership Structure

L 25 Firm Performance: Size

Z 10 General Culture Economics

Z 12 Religion

ABSTRACT ESPAÑOL

Diferentes teorías financieras han tratado de explicar la estructura de capital de las empresas considerándola como una elección racional con resultados limitados. Por el contrario, la teoría de las élites directivas destaca la influencia de los valores y creencias de los altos directivos en las decisiones de las empresas y la teoría institucional complementa esta visión con el papel de los valores y normas institucionales en las decisiones y opciones financieras. Nuestra investigación analiza la influencia de los valores culturales y la pertenencia a una religión en la explicación de por qué las PYMEs difieren en sus preferencias financieras, con el objetivo de enriquecer las teorías racionales del área financiera con la propuesta de la teoría de las élites directivas y la teoría institucional. Por lo tanto, el presente estudio utiliza el marco cultural de Hofstede (2021) y datos de pertenencia al cristianismo de 24 países europeos -y de las dos principales religiones cristianas- para analizar su impacto en la estructura de capital, específicamente en sus preferencias entre capital y pasivo. Además, analiza el impacto de la cultura y la religión en el comportamiento de asunción de riesgos de las PYMEs. A través de una base de datos de 27.778 pymes manufactureras de 24 países de la UE con información financiera de 2015-2019 y utilizando análisis multinivel, encontramos evidencia de que la cultura y la religión influyen en la elección de la estructura de capital en las pymes y afectan su comportamiento de toma de riesgos. Sin embargo, y en contraste con varios investigadores anteriores, que encuentran una fuerte relación entre la cultura, la religión y el comportamiento financiero de las empresas, nuestros resultados muestran un efecto de la cultura y la religión en la dirección prevista, pero, de pequeño tamaño.

ABSTRAKT DEUTSCH

Verschiedene Finanztheorien haben versucht, die Kapitalstruktur von Unternehmen zu erklären, indem sie sie als rein rationale Entscheidung betrachten. Mit mäßigen Ergebnissen. Im Gegensatz dazu betont die Upper-Echelons-Theorie den Einfluss der Werte und Überzeugungen von Top-Managern auf die Entscheidungen von Unternehmen und die Institutionstheorie ergänzt diesen Einfluss um die Rolle der institutionellen Werte und Normen bei finanziellen Entscheidungen und Optionen. Unsere Forschung untersucht den Einfluss kultureller Werte und religiöser Zugehörigkeit, um zu erklären, warum sich KMU in ihren finanziellen Präferenzen unterscheiden, um die Lücke zwischen rationalen Finanztheorien und Vorschlägen der oberen Ränge zu schließen. Daher verwendet die vorliegende Studie den kulturellen Rahmen von Hofstede (2021) und Daten zur christlichen Zugehörigkeit aus 24 europäischen Ländern und den beiden wichtigsten christlichen Glaubensrichtungen, um ihre Auswirkungen auf die Kapitalstruktur zu analysieren, insbesondere in ihren Präferenzen zwischen Eigenkapital und Verbindlichkeiten. Darüber hinaus untersucht die Studie das Risikoverhalten von KMU und die kulturellen und religiösen Auswirkungen auf dieses Thema. Mit einem Datensatz von 27.778 produzierenden KMU aus 24 EU-Ländern mit Finanzinformationen von 2015-2019 und unter Verwendung einer statistischen Mehrebenenanalysen findet die Studie Hinweise dafür, dass Kultur und Religion die Wahl der Kapitalentscheidungen und ihr Risikoverhalten beeinflussen. Im Gegensatz zu verschiedenen früheren Studien, die eine starke Beziehung zwischen Kultur und Religion und dem Finanzverhalten innerhalb von Unternehmen feststellen, zeigen unsere Ergebnisse jedoch einen sehr geringen Einfluss von Kultur und Religion auf die Vorhersagerichtungen des Finanzverhaltens.

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LIST OF ABBREVIATIONS

BIGSSS	-	Bremen International Graduate School of Social Sciences
BPB	-	Bundeszentrale für politische Bildung
CEO	-	Chief Executive Officer
GDP	-	Gross Domestic Product
GLOBE	-	Global Leadership & Organizational Behavior Effectiveness
IFIM	-	Institute for Intercultural Management
IPO	-	Initial Public Offering
KMU	-	Klein- und Mittelständische Unternehmen
MNE	-	Multinational Enterprises
ORBIS®	-	Online database by Bureau Van Dijk – A Moody’s Analytics Company
PAT	-	Principal Agency Theory
PYME	-	Pequeña y Mediana Empresa
ROA	-	Return on Assets
ROE	-	Return on Equity
SD	-	Standard Deviation
SME	-	Small and Medium-sized Enterprises
TMT	-	Top Management Team
UET	-	Upper Echelons Theory
U.S.	-	United States
USA	-	United States of America
ZIM	-	Zentrum für Interkulturelles Management

RESUMEN EN ESPAÑOL

La elección de la estructura de capital de una empresa es probablemente la decisión más fundamental de un director ejecutivo en la gestión financiera de una PYME con el fin de minimizar los costos de capital y maximizar el valor de las empresas. ¿Existe una estructura de capital óptima?, si la hay, ¿qué factores influirán en ella? Esta ha sido una pregunta central de investigación durante más de 60 años. La estructura de capital óptima, utilizando la participación óptima en capital social y de deuda, se reduce a dos factores principales: minimizar el costo de capital y maximizar el valor de la empresa (Hermanns, 2006). El principio de irrelevancia de la estructura de capital de Modigliani & Miller (1958) sentó las bases para futuras investigaciones sobre la estructura de capital óptima dentro del campo de las finanzas. Hasta el día de hoy han surgido diferentes teorías, las más famosas son: la Teoría de la compensación de Kraus y Litzenberger (1973), la Teoría del orden jerárquico de Myers y Majluf (1984), y los últimos enfoques dinámicos, por ejemplo, la teoría del tiempo de mercado de Baker & Wurgler (2002).

Según la visión tradicional, la elección de la estructura de capital es totalmente racional (Hens & Wang, 2007). El principio de irrelevancia de la estructura de capital supone un mercado perfecto, sin impuestos, sin costos de información y transacciones, sin riesgos y gastos por dificultades financieras; por lo tanto, la elección de la estructura de capital es irrelevante para el valor de la empresa (Modigliani & Miller, 1958). Aunque en el mundo real no existe un mercado perfecto, sus teoremas todavía se valoran en la actualidad. Las posteriores teorías sobre la estructura de capital trataron de incluir estas imperfecciones del mercado, como impuestos, costos de transacción, costos de dificultades financieras e información asimétrica.

Se plantea la cuestión de si el debate teórico sobre la estructura óptima del capital ha creado un modelo establecido. Se puede sostener que hasta el día de hoy y, a pesar de un campo de investigación de más de sesenta años, no ha existido un modelo explicativo definitivo y universal de la estructura de capital de una empresa. El hecho de que no haya dos empresas iguales, y el hecho de que, tras muchos años de discusión, un gran número de factores complejos, parcialmente observables y parcialmente no observables influyan en la estructura de capital, ha llevado a entender que en el futuro no surgirá una explicación general de la teoría válida de la estructura de capital (Hermanns, 2006). Después de décadas de tratar este tema, el científico financiero Myers (2001) concluyó: “No existe una teoría universal de la elección de deuda-capital y no hay razón para esperar una”. (pág. 81).

La discusión histórica, casi exclusivamente teórica, ha dado paso a un enfoque más pragmático y realista en los últimos años, en el que los aspectos individualmente relevantes para la estructura de capital están siendo cada vez más estudiados teóricamente y comprobados empíricamente.

Sorprendentemente, todas estas teorías financieras no analizan el papel del CEO/TMT y de su impacto en las decisiones sobre la estructura de capital de la empresa. Si bien los directores generales y la alta dirección de la firma tienen un impacto incuestionable en las decisiones y acciones de la empresa (Hambrick & Mason, 1984) y suelen tener una idea muy concreta sobre la estructura de capital de la misma (Spiecker-Lampe, 2018), no juegan un papel esencial en todas estas teorías de la estructura de capital.

En ese sentido, la Teoría de la Agencia de Jensen & Meckling (1976) -enfocada en los conflictos entre propietarios y gerentes y las asimetrías de información- los incluyó en su modelo. Ampliaron la cuestión de la estructura de capital a una cuestión de propiedad y gestión. La Teoría de la Agencia trata en diferentes partes de la investigación con el individuo que hay detrás de la organización. Presenta evidencia significativa de que un gerente individual tiene una influencia sustancial en la empresa y, por lo tanto, en la estructura de capital. Hasta la actualidad, la literatura ha discutido diferentes modelos e hipótesis que tratan sobre la misma idea de fondo, la opinión de que el “agente” tiene una idea diferente sobre la “mejor estrategia” para la empresa que el “principal”. Entonces, según la teoría de la agencia, parece haber una fuerte influencia del director general de la empresa. En este sentido, por ejemplo, Shoaib y Siddiqui (2022) confirman una fuerte relación entre la estructura de capital y el desempeño de la empresa utilizando la teoría de la agencia en lugar de la teoría del *trade-off* o la teoría del *pecking order*.

Esta influencia también se plasma en la teoría de las élites directivas (en adelante UET) de Hambrick & Mason (1984). Los CEO y sus equipos de alta dirección (TMT) influyen en la organización, sus acciones y comportamientos. En su enfoque, Hambrick y Manson proponen, por ejemplo, que los antecedentes socioeconómicos de las élites directivas pueden tener una conexión significativa entre las decisiones del director ejecutivo y la estrategia de la empresa. Además, muchos investigadores han demostrado que esta influencia es aún más significativa cuando se trata de pequeñas empresas (Dolz, Iborra y Safón, 2019).

Sin embargo, la UET se ha utilizado frecuentemente en conexión con otras teorías, ofreciendo de este modo un mayor poder explicativo. En su revisión teórica, Nielsen (2010) revisa 60 artículos de revistas de 1984 a 2005, utilizando la UET y afirma que la investigación de las élites directivas es cada vez más multidisciplinar. Por ejemplo, Nielsen y Nielsen (2013)

conectan la Teoría de la Economía Institucional de North (1990) con la UET para mostrar la conexión entre los niveles individual, organizacional e institucional. Siguiendo este enfoque, la presente investigación conecta la UET con la Teoría Institucional para mostrar la relación vital entre los niveles institucional, corporativo e individual.

Las propuestas de ambas teorías son aún más significativas para las Pequeñas y Medianas Empresas (en adelante, PYME) (Berthod, 2016). Las PYMES son una parte esencial de una economía local y, por lo tanto, están conectadas con los clientes, proveedores, financiadores y, en general, con las partes interesadas locales. De este modo, sus empleados y sus actores clave, incluidos el director ejecutivo y los TMT, suelen estar profundamente conectados con la comunidad, incluyendo todos los privilegios y obligaciones. Por lo tanto, sus valores individuales, como la sinceridad, la modestia, la honestidad, la diligencia, la conciencia y la confiabilidad, están influenciados por los valores institucionales. Además, estos valores parecen tener un papel esencial en la aversión al riesgo y el comportamiento ético. Meyer y Rowan (1977) afirman que los procesos sociales, las obligaciones o las situaciones actuales que alcanzan un estatus de norma en el pensamiento o la acción social, influyen en los individuos, y Scott (2017) añade que los sistemas simbólicos y conductuales contienen reglas representacionales, constitucionales y normativas, junto con mecanismos reguladores, que definen un sistema de significado universal, dando lugar a actores (individuos) distintivos y a sus rutinas de acción. Estos argumentos son la base de la Teoría Institucional.

Volviendo a la estructura de capital de las empresas, el administrador individual parece tener una enorme influencia en esta estructura; los valores y normas institucionales influyen en los administradores y su entorno. Esto pone de relieve que la visión tradicional, en la que las decisiones y elecciones financieras se toman con cálculos económicos racionales y un enfoque estrecho (Hens & Wang, 2007), necesita considerar actores relevantes y olvidados. Por tanto, proponemos en esta investigación que el papel de los valores individuales y los valores y normas institucionales en las decisiones y opciones financieras exigen la atención de los investigadores.

En ese sentido, el campo cultural es una de las influencias significativas que conectan con esta toma de decisiones siendo una dimensión esencial de la Teoría Institucional y la UET; más aún, el área cultural ha estado presente en la investigación financiera. La primera literatura que relaciona la toma de decisiones financieras con la cultura se remonta a Smith (1776) y Weber (1905) a las raíces de las finanzas y la cultura, incluida la religión. Durante la última década, ha habido un creciente cuerpo de literatura conectando, en diferentes áreas de investigación del campo económico, la investigación financiera y la cultura. El objetivo principal es mostrar la

desconexión de la toma de decisiones -principalmente sobre los datos de los estados financieros y sus ratios- con las normas sociales que rodean a estas empresas y conectarlas con otras realidades diferentes. Aggarwal y sus colegas, por ejemplo, presentan en diversos estudios que la cultura, la confianza y los costes de transacción están profundamente vinculados a las decisiones financieras (Aggarwal y Goodell (2010), (2014)a, (2014)b, y Aggarwal et al. (2016)). Sin embargo, la cultura es un concepto dinámico en un estado de cambio causado por el desarrollo y la transformación social (Kühnen, 2015). Por ejemplo, Maridal (2013) define la cultura como “las creencias y el sistema de valores de la sociedad”, Licht (2001) argumenta que la cultura es la “madre de todas las dependencias estructurales”, y Hofstede y Bond (1988) describen la cultura como la forma en que la gente piensa, siente y actúa, incluidos los valores, las creencias, los comportamientos, la educación, los modales y las artes. En la actualidad, aparecen diferentes modelos de cultura, utilizados con frecuencia, algunos de ellos pertenecientes a las teorías históricas - así, Kluckhohn & Strodtbeck (1961) y Hall y Hall (1990) se basaron en distintas investigaciones bibliográficas y procedían principalmente de antropólogos y etnólogos- y otros, pertenecientes a las teorías modernas (Reimer, 2005), por ejemplo, el Mapa cultural de Erin Meyer (2014), de Trompenaars (2005), Schwartz (1999), Fundación GLOBE Study (Global Leadership & Organizational Behavior Effectiveness) (2018), World Values Encuesta (2018) y Hofstede (2001).

El más conocido y citado es el modelo cultural de Hofstede (2001), por lo que el presente estudio utiliza este modelo de la cultura nacional. De las seis dimensiones esenciales de Hofstede (distancia al poder, aversión a la incertidumbre, colectivismo versus individualismo, feminidad versus masculinidad, orientación a largo plazo e indulgencia versus moderación), algunas de estas dimensiones están específicamente conectadas con la toma de decisiones financieras. La literatura más reciente presenta principalmente tres variables culturales de Hofstede, y variables con significado similar de las otras teorías, que parecen tener una influencia esencial en la toma de decisiones financieras en general y que se pueden argumentar como más cercanas a las decisiones sobre la estructura de capital de una empresa. Las diversas dimensiones de Hofstede probados juntas, no muestran ninguna correlación estadísticamente significativa, lo que implica que cada variable captura una dimensión diferente de la cultura nacional (Mourouzidou-Damtsa, Milidonis y Stathopoulos, 2019).

En ese sentido, las dimensiones del individualismo, la aversión a la incertidumbre y la orientación a largo plazo han sido conectadas por varios investigadores con la investigación financiera. El individualismo pertenece a sociedades donde los lazos entre los individuos son débiles, en contraste con el colectivismo, que pertenece a culturas donde las personas se cuidan

entre ellas, tienen relaciones sanas y se comportan cohesivamente (Haq, Hu, Faff, & Pathan, 2018). Mourouzidou-Damtsa, Milidonis y Stathopoulos (2019) presentan con sus resultados una asociación positiva entre el individualismo y la asunción de riesgos bancarios. Haq, Hu, Faff y Pathan (2018) descubren que las culturas con un alto grado de individualismo tienen más apalancamiento. La aversión a la incertidumbre mide hasta qué punto los individuos se sienten cómodos con la ambigüedad como miembros de la sociedad (Hofstede, 1984). En general, la investigación científica ha demostrado que la asunción de riesgos bancarios está negativamente relacionada con una alta aversión a la incertidumbre (Ashraf, Zheng y Arshad, 2016). La orientación a largo plazo, por el contrario, se basa principalmente en el “pensamiento confuciano”, que implica tener preferentemente éxito a largo plazo, incluyendo metas y ahorro (Hofstede, 2001), y los investigadores afirman que las empresas en países con alta orientación al largo plazo tiende a tener menos apalancamiento (Wang & Esqueda, 2014).

Basándonos en estas investigaciones previas, esta tesis argumenta que la cultura nos permite analizar la influencia de los valores en la toma de decisiones financieras -a través de la Teoría Institucional y la UET-.

Pero, los valores y creencias deben incorporar otras influencias relevantes además de las culturales; específicamente, argumentamos que deben considerar el papel de la religión en la toma de decisiones financieras. Yendo un paso más allá, la literatura plantea una fuerte influencia entre la cultura y la religión. Terpstra y Kenneth afirman: “Ciertamente, la religión es un resorte principal de la Cultura. En cualquier Cultura, algunas referencias a un orden indemostrable de la realidad (divinidad, dialéctica histórica, nacionalismo) justifican patrones de autoridad y patrones de intercambio igual o desigual entre los miembros de la sociedad. Los sistemas educativos, las organizaciones políticas y las relaciones sociales, como el papel de la mujer, se ven significativamente afectados por la religión de una sociedad. La religión también tiene un impacto en el nivel práctico de la empresa comercial”. (Terpstra & Kenneth, 1991, pág. 72).

Con estas palabras, Terpstra y Kenneth resumen la literatura inicial de las décadas de 1970 a 1990 que considera la religión como un rasgo cultural, conceptualización compartida entre antropólogos (Baal, 1971) y estudiosos de la organización (Gómez-Mejía, 1984), entre otros. Esta línea de investigación se ha convertido en una importante corriente de investigación. Así, en la relación entre cultura y religión, autores como Stulz y Williamson (2003) defienden que: “La cultura puede afectar las finanzas a través de al menos tres canales. En primer lugar, los valores que predominan en un país dependen de su cultura. Por ejemplo, cobrar intereses puede ser pecado en una religión pero no en otra. En segundo lugar, la cultura afecta a las instituciones.

Por ejemplo, el sistema legal está influenciado por los valores culturales. En tercer lugar, la cultura afecta la forma en que se asignan los recursos en una economía. Las religiones que fomentan el gasto en iglesias o armas quitan recursos a la inversión en producción”. (Stulz & Williamson, 2003, pág. 313). Al mencionar la religión como “un representante común de la cultura”, Stulz y Williamson (2003, p. 315) están siguiendo a La Porta, López-de-Silanes, Shleifer y Vishny (1999), quienes conectaron la cultura, el derecho y la religión en sus estudios. Por otro lado, separada de las dimensiones y valores culturales, se estudia la influencia individual de la religión sobre diversos tipos de toma de decisiones. Parte de esta investigación compara el impacto del nivel de religiosidad y no religiosidad sobre diversas cuestiones empresariales y financieras; otros estudios, se enfocan en el análisis del impacto de una fe específica, como el cristianismo, el islamismo, el hinduismo, el budismo, en comparación con el grupo objetivo no religioso; en otros casos, las diferentes religiones se analizan y comparan entre sí, por ejemplo, las religiones occidentales frente a las orientales; en este caso, hay otra corriente que divide el cristianismo en sus dos partes principales y establece la diferencia entre los creyentes católicos y protestantes. Con respecto a su impacto en la toma de decisiones financieras, por ejemplo, He & Hu (2016) encuentran evidencia de que los términos de los préstamos bancarios difieren para las empresas localizadas en áreas con diferente nivel de religiosidad. Valores como la aversión al riesgo, el comportamiento ético y la honestidad juegan un papel fundamental para prestatarios y prestamistas. Estos valores están relacionados con la religiosidad, lo que lleva a suponer que cuanto mayor es la religiosidad en un contexto local menores serán los intereses. Cai & Shi (2017), documentan que las empresas en áreas menos religiosas tienen un mayor nivel de endeudamiento y una peor calificación crediticia que las empresas en áreas más religiosas. Otros estudios presentan evidencia de que los bancos en áreas más religiosas tienen menor riesgo y tienen activos más seguros, lo que conduce a una mejor calificación (Adhikari & Agrawal, 2016).

Basándonos en esta investigación, el presente estudio argumenta que hay una conexión entre la cultura y las decisiones financieras y la religión y la toma de decisiones financieras de los individuos, lo que puede ayudar a explicar las diferencias en las estructuras de capital y la toma de riesgos en las organizaciones. Además, esta tesis establece que estas relaciones deberían ser principalmente visibles en las PYMEs, donde el impacto del CEO y el TMT (las élites directivas) en las decisiones de la empresa es más evidente. En estos contextos es previsible que el impacto de lo local en referencia a las normas y valores locales sea más evidente. En este sentido, otros investigadores encuentran que las empresas internacionales y las multinacionales

están influidas por otros factores más “globales” y son gestionadas con frecuencia por TMT extranjeros con perfiles globales (Mourouzidou-Damtsa, Milidonis y Stathopoulos, 2019).

En síntesis, se puede concluir que aunque las teorías del mercado de capitales tienen su lugar en la literatura académica y todavía se utilizan para examinar la estructura de capital en modelos de grandes empresas, deberían ser complementadas a través de las teorías como la UET y la Teoría Institucional, que permiten incorporar la influencia de los valores y las creencias en la toma de decisiones financieras en las PYMEs. En este trabajo esto se aplica a la influencia de los valores culturales y la influencia de la religión en las decisiones financieras de las PYMEs (estructura de capital y riesgo). Hasta ahora, estas conexiones no se han considerado adecuadamente en la investigación de las ciencias financieras.

Si bien las PYMEs son la columna vertebral de la economía europea y que una gran parte de la financiación concedida recae en estas empresas, hay una necesidad de un mayor conocimiento actualizado y empírico de las estructuras de capital y los factores que las influyen; es decir, del comportamiento financiero actual de las pequeñas y medianas entidades paneuropeas.

Por lo tanto, la presente investigación contribuye a las teorías del mercado de capitales que examinan la estructura de capital de las empresas, extendiendo su modelo para considerar el papel de la cultura y la religión y su impacto en el comportamiento financiero de las PYMES. Para desarrollar este modelo, utilizamos la Teoría Institucional y la UET, afirmando que el entorno de cultura y religión en el que están inmersos los gerentes, impacta sus procesos de decisión y, por lo tanto, sus elecciones financieras y, en consecuencia, en la estructura de capital de la empresa.

¿Importan la cultura y la religión en las decisiones financieras? Para responder a esta pregunta, utilizamos una gran base de datos de 27.778 empresas medianas de la UE27 durante el período 2015-2019. Nuestro estudio proporciona cierto apoyo al impacto de la religión y la cultura en las decisiones financieras, pero en comparación con estudios anteriores, este impacto parece ser menor.

Con respecto a nuestra hipótesis del impacto de la cultura y la religión en la estructura de capital de las empresas, nuestras dos medidas de estructura de capital produjeron resultados diferentes. Si bien la relación deuda/activo ha sido ampliamente utilizada y aceptada para medir la estructura de capital de las empresas, la segunda variable, deuda/ingresos, parece tener un mayor poder predictivo en las PYMEs. En este sentido, el contexto de las PYMEs puede ser relevante para resaltar el papel del endeudamiento en relación con los ingresos y la posibilidad de pagar las deudas con él.

La estructura para probar nuestra hipótesis sigue el siguiente camino: el primer modelo, de todos los conjuntos de modelos, siempre introduce las variables de control a nivel de país y empresa con la variable dependiente. Posteriormente, las variables independientes se prueban individualmente primero con la variable dependiente deuda sobre activos y luego se reproducen con la variable dependiente deuda sobre ingresos.

Inicialmente partimos de varias variables de control, desde el nivel organizacional e institucional, las cuales redujimos, por el tamaño a nivel país (N=24), a dos variables de control a nivel organizacional y una a nivel institucional.

Nuestros hallazgos indican que un porcentaje significativo de la estructura de capital de las pymes europeas puede explicarse por variables a nivel de país y empresa. En concreto, el ROA de la empresa y la renta mediana del país explican hasta un 17,7% de la varianza.

La primera parte del conjunto de hipótesis trataba sobre el impacto de la cultura en la estructura de capital de la empresa. Con la variable Deuda sobre Activos, solo encontramos resultados significativos para la variable aversión de la Incertidumbre, al nivel del 5%. Todas las demás variables de Hofstede no fueron significativas. En los modelos de verificación de robustez, solo fueron significativos el Compromiso Igualitario de Schwartz, al nivel del 5%, y el Colectivismo I Valores Sociales.

La reproducción del test con la variable dependiente Deuda sobre Ingresos, presentó influencia significativa, al nivel 5%, de las dimensiones culturales del individualismo, la masculinidad y la aversión a la incertidumbre con un tamaño de efecto muy bajo. Las demás no fueron significativas. En los modelos de verificación de robustez, maestría y compromiso igualitario, al nivel de significatividad del 5 %, de la propuesta de Schwartz. Respecto al modelo de GLOBE fueron significativos al 5% las prácticas sociales para evitar la incertidumbre, prácticas sociales para la distancia del poder, prácticas sociales para el colectivismo II, prácticas sociales para el igualitarismo de género, valores sociales para evitar la incertidumbre, valor social para la orientación futura, valores sociales de distancia del poder, los valores sociales de orientación humana y los valores sociales de igualdad de género y los valores sociales de colectivismo I. Los resultados, de las tres diferentes teorías culturales, están en línea entre sí.

En relación a las hipótesis 1a-1f, nuestra evidencia empírica confirma las hipótesis 1b, 1c y 1d al nivel del 5%. El individualismo y la evitación de la incertidumbre están en línea con nuestra hipótesis de que un mayor nivel de individualismo y evitación de la incertidumbre conduce a un mayor nivel de deuda. Estos hallazgos respaldan hallazgos anteriores, por ejemplo, y entre otros, Wang y Esqueda (2014) y Haq et al. (2018).

La evidencia de que países con una mayor dimensión de masculinidad, conducen a una mayor cantidad de deuda, también está en línea con nuestras predicciones y la literatura (Wang & Esqueda, 2014). El resto de dimensiones no fueron significativas. Destacamos especialmente que la orientación a largo plazo, recogida en la hipótesis 1e, no mostró significación alguna.

En relación al valor explicativo de las variables culturales sobre la deuda sobre activos y deuda sobre ingresos, solo suma entre 0,3% y 1,0% para las variables de Hofstede, 0,9%-2,4% para Schwartz, y 0,3%-3,0% para GLOBE. Es decir, algunas de las variables culturales son significativas, pero el tamaño del efecto es pequeño.

La segunda parte del conjunto de hipótesis trataba sobre el impacto de la religión en la estructura de capital de las PYMEs. La hipótesis 2, que propone la relación entre el cristianismo y la variable deuda sobre activos, encontramos que es significativa, pero en dirección contraria a la esperada, tal y como habíamos propuesto en base a la literatura previa. El impacto del protestantismo y catolicismo no eran significativos. Con la reproducción de la prueba con la variable dependiente deuda sobre ingresos, encontramos una relación significativa para el cristianismo, nuevamente en la dirección opuesta a nuestra hipótesis. La relación entre deuda sobre ingresos y porcentaje de protestantes es significativa. El efecto del porcentaje de católicos no fue significativo. Por lo tanto, la hipótesis 3 se apoya parcialmente. La hipótesis 4 que recogía el impacto del catolicismo sobre la estructura de capital de las PYMEs no encuentra apoyo en esta investigación. Respecto al valor explicativo de la religión o de una de las dos afiliaciones religiosas en la deuda sobre activos y deuda sobre ingresos, solo suma entre 0,3% y 1,5% de la estructura de capital de las empresas. Ambas proporciones son significativas, pero el tamaño del efecto es pequeño.

Entonces, volviendo a la pregunta inicial: ¿la cultura y la religión tienen un impacto en la estructura de capital de las pymes en toda Europa? La respuesta es definitivamente sí, pero más baja y de una manera diferente a la que han encontrado estudios previos en la literatura.

El impacto diferencial de la religión y la cultura revelado por nuestro conjunto de datos puede explicarse por nuestras características únicas de diseño de investigación, que arrojan nueva luz sobre la pregunta de investigación antes mencionada.

Así, nuestro diseño de investigación difiere de estudios previos en cuatro aspectos.

Primero, debido al marco temporal de nuestro conjunto de datos, que incluye los datos más recientes a nivel de empresa, siendo el período más cercano en la literatura 2007-2015, por Díez-Esteban et al. (2019). Esto implica que, además, nuestro estudio ha tenido en cuenta las normas contables y de balance más recientes.

En segundo lugar, en comparación con estudios anteriores, utilizamos uno de los conjuntos de datos más grandes a nivel de empresa, con hasta $N=27.778$, la muestra promedio va de $N=5.000$ a $N=10.000$ (Baxamusa & Jalal, 2014; Adhikari & Agrawal, 2016; y He & Hu, 2016). Adicionalmente a ser un gran conjunto de datos, se especializa en pymes manufactureras privadas, a diferencia de otras bases de datos que incluyen empresas que cotizan en bolsa, como las utilizadas por Baxamusa y Jalal (2014), entre otros.

Como tercer aspecto, creamos un conjunto de datos europeo completo basado en los países de la UE-27, similar al de Gaganis et al. (2019), y no uno mundial como el de Diez-Esteban et al. (2019) o un conjunto de datos de EE. UU. (Adhikari & Agrawal 2016; He & Hu 2016). Teniendo en cuenta las raíces cristianas de Europa, sorprende el relativo predominio de los estudios estadounidenses en este campo de estudio. En este sentido, nuestros resultados sugieren que las sociedades europeas han evolucionado y que hoy en día, la religión solo afecta levemente el comportamiento financiero.

Finalmente, la mayoría de los estudios previos utilizaron una metodología inadecuada al aplicar la regresión de mínimos cuadrados ordinarios (OLS) en un conjunto de datos multinivel con variables multinivel, como variables a nivel nacional y organizacional (Hilary and Hui, 2009; Jiang et al., 2015; Adihikari y Agrawal, 2016; He y Hu, 2016). Por lo tanto, nos enfocamos en una pregunta de investigación multinivel y empleamos modelos lineales jerárquicos para explorar la singularidad de nuestro conjunto de datos multinivel, donde los datos organizacionales están anidados dentro de los datos institucionales. Según Molina-Azorín et al. (2020), “la investigación multinivel incluye el desarrollo de la teoría multinivel (p. ej., la combinación de diferentes enfoques teóricos en diferentes niveles y el establecimiento de relaciones entre constructos en diferentes niveles), así como los elementos principales de los métodos para estudios empíricos (muestreo, recopilación de datos, variables y sus medidas, y técnicas de análisis...” (p. 309). La investigación multinivel puede ayudar a superar los problemas asociados con los métodos clásicos de agregación y desagregación de datos que pueden llevar a conclusiones irrelevantes cuando se usan datos medidos y analizados en un nivel diferente porque la jerarquía y no se tiene en cuenta la estructura anidada de los datos (Molina-Azorin et al. 2020).

Así, nuestros resultados demuestran la influencia de la cultura en la estructura de capital de las PYMES en línea a lo que habíamos anticipado con base en nuestra revisión de literatura aunque no siempre en el sentido esperado. Nuestros resultados sobre la aversión a la incertidumbre son consistentes con Wang & Esqueda (2014); sin embargo, los resultados para la dimensión de

masculinidad son contrarios a Wang & Esqueda (2014) y Haq et al. (2018), y para el Individualismo también son contrarios a Wang & Esqueda (2014).

Para la influencia de la religión cristiana en la estructura de capital de las PYMES, encontramos apoyo para nuestra hipótesis, sin embargo, en la dirección opuesta a la que habíamos anticipado con base en nuestra revisión de la literatura. Nuestros resultados son consistentes con He & Hu (2016), quienes también encontraron montos de préstamo mayores para países de alta adhesión religiosa. Dos razones pueden ayudar a explicar estos resultados. Por un lado, mientras que el cristianismo tiene un efecto significativo, el efecto de tamaño es pequeño. Esto podría deberse al hecho de que nuestros datos contemporáneos reflejan la pérdida de influencia de la religión en empresas e individuos en países europeos. Por otro lado, la mayoría de los estudios realizados hasta ahora sobre este tema son de países anglosajones, y a la hora de evidenciar la influencia de las religiones cristianas, no hacen explícito que al referirse a la religión cristiana el protestantismo es en los países anglosajones claramente mayoritario, algo que difiere en países europeos con mayoría de católicos (Francia, España e Italia, entre otros). En nuestro estudio de 24 Estados miembros de la UE, más de 14 tenían una mayoría católica, en comparación con 5 estados principalmente protestantes, con un porcentaje general de 44,5 % de católicos y 11,8 % de protestantes (Agencia Federal para la Educación Cívica, 2019). Así, cuando los estudios de los países o regiones anglosajones se refieren al porcentaje de cristianos, en realidad se refieren a los protestantes (ya que son países mayoritariamente protestantes), y en los estudios europeos ocurre lo contrario.

¿Afectan la cultura y la religión a la estructura de capital de las PYME en un contexto paneuropeo? Definitivamente SÍ. SIN EMBARGO, de manera diferente, como encontramos la mayoría de los resultados en la literatura. Nuestras hipótesis se basaron en los resultados de la investigación previa de la literatura y se han realizado en consonancia con los estudios previos en la literatura. Sin embargo, los resultados generales no son como los esperábamos, y nuestros datos, han mostrado una imagen diferente.

Entonces, ¿por qué nuestros resultados son inconsistentes con estudios previos, y apuntan a la falta de importancia de la religión y su influencia en las decisiones financieras? Por un lado, podría significar que las diferencias culturales y la religión están perdiendo influencia en la estructura financiera de las empresas en Europa, y otros factores se están volviendo más influyentes. Por otro lado, no queda claro si se trata de una tendencia general o si los resultados de nuestro estudio de las pymes europeas entre 2015 y 2019 son tan específicos que el efecto de la cultura y la religión solo se niega dentro de este marco temporal y contexto, a diferencia de otros estudios que han encontrado una fuerte correlación entre la influencia religiosa y las

decisiones financieras (Hilary y Hui, 2009; Adhikari y Agrawal, 2016; Diez-Esteban et al. 2019).

Nuestra segunda pregunta de investigación fue si la cultura y la religión influyen en el comportamiento de riesgo de las PYME. Usamos la desviación estándar del índice de retorno sobre el capital para evaluar el riesgo (SD de ROE) a nivel organizacional, como lo han hecho anteriormente Titman y Wessels (1988) y Mogha y Williams (2021). Gracias a la singularidad de nuestros datos de panel de cinco años, pudimos calcular la desviación estándar para un horizonte temporal de cinco años, siguiendo a Killins et al. (2020), Saif-Alyousfi et al. (2020), Dalwai et al. (2021) y Rutkowska-Ziark (2022).

En términos de riesgo, nuestras variables de control dan cuenta de la mayor parte de la varianza explicada (R^2). La variable a nivel de empresa ROA y la variable de país -ingreso medio- muestran una significación alta. La cantidad de empleados no es significativa.

Contrastamos las hipótesis 5a - 5e, en el modelo 24 - 29. Las hipótesis 5c, 5d y 5e fueron significativas al nivel del 5%, lo que indica que altos niveles de masculinidad, aversión a la incertidumbre y orientación a largo plazo conducen a una menor toma de riesgos. Estos resultados están en línea con Ashraf, Zheng y Arshad (2016). Las hipótesis 5a, 5b y 5f, con las variables distancia de poder, individualismo e indulgencia no son significativas. En la prueba de robustez, las variables Prácticas sociales de igualdad de género, Valores sociales de evitación de la incertidumbre también estuvieron en línea con los resultados de las variables de Hofstede. Respecto al impacto de la religión contrastamos las hipótesis 6, 7 y 8 en los modelos 31-33. La hipótesis 6 fue estadísticamente significativa y en línea con varios otros estudios (Hilary & Hui, 2009; Dryeng et al., 2012, Kanagaretnam et al., 2015; y Adhikari & Agrawal, 2016) que muestran que los niveles más altos de cristianismo en un país conducen a niveles más bajos de riesgo. Los resultados del contraste de la hipótesis 7, respecto al protestantismo no son estadísticamente significativos.

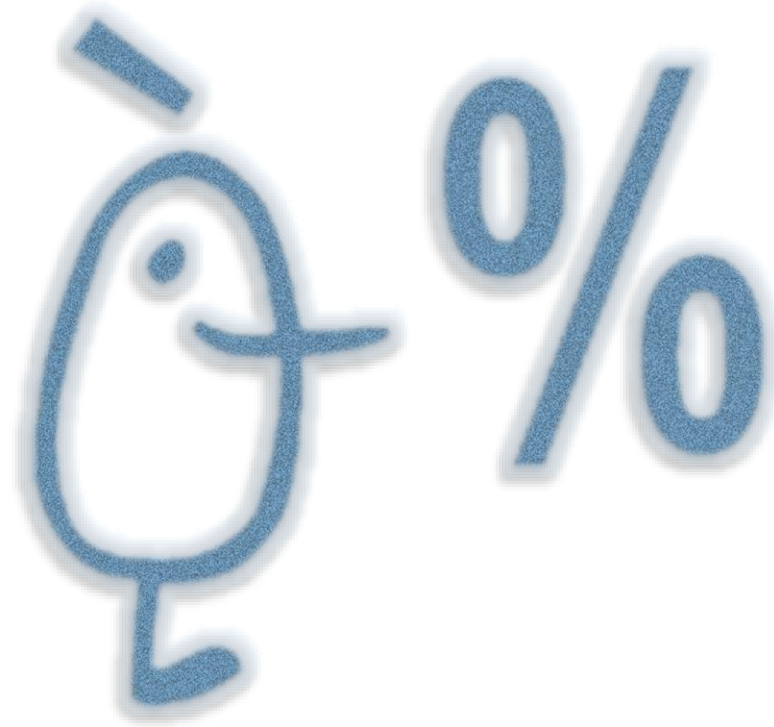
La hipótesis 8, sobre el impacto del catolicismo en el riesgo que asumieron las empresas fue significativa; sin embargo, la relación se contrasta en dirección contraria a la esperada. Por lo tanto, nuestros resultados no están en línea con estudios previos, como Shu et al. (2012) y Diez-Esteban et al. (2019), quienes afirman que las empresas en áreas católicas tienden a tener mayores niveles de riesgo. Sin embargo y, por otro lado, estos resultados están en la línea de Baxamusa y Jalal (2015), quienes encontraron que los católicos tienden a correr menos riesgos.

Este estudio hace contribuciones significativas a la literatura. Trata de arrojar algo de luz sobre la cuestión de cómo la cultura y la religión están relacionadas con las decisiones de estructura

de capital de las empresas; en un contexto paneuropeo y a nivel de PYME, tuvimos implicaciones prometedoras para otros investigadores y profesionales que se ocupan del impacto de la cultura y/o la religión en la estructura de capital.

Nuestro estudio, como cualquier otro, tiene limitaciones. Primero, solo usamos datos promedio de cada país para medir las variables de religión y país. Somos conscientes de que existen variaciones locales dentro de los países; por ejemplo, en Alemania, aproximadamente un tercio de la población es católica, un tercio es protestante y un tercio es aconfesional. En segundo lugar, en este estudio hemos intentado explicar las influencias individuales de los que toman las decisiones, pero sólo una entrevista cualitativa o cuantitativa personal podría proporcionar una imagen más precisa de las creencias religiosas de cada uno de los que toman las decisiones. Además, no pudimos mostrar la influencia de la religión en la cultura o viceversa y mostrar el efecto conjunto de ambos en la estructura de capital.

Las futuras líneas de investigación podrían comenzar exactamente donde se encuentran las limitaciones del estudio. Se podría cuestionar a los directores ejecutivos sobre el papel que juega la religión en sus decisiones financieras, similar al estudio de Zitelmann (2017). Además, el modelo propuesto podría aplicarse a muestras más pequeñas, como empresas locales a nivel estatal (Dasi, Iborra y Safon, 2015), o incluso a nivel de condado.



CHAPTER 1

INTRODUCTION AND MOTIVATION

1 INTRODUCTION AND MOTIVATION

1.1 Problem and Objective

The choice of a company's capital structure is probably the most fundamental decision of a CEO in Finance management to minimize capital costs and maximize the firms' value. Whether there is an optimal capital structure, and if there is, which factors will influence it, has been a central research question for more than 60 years. The optimal capital structure, using the optimum share in equity and debt capital, is reduced into two main factors: minimizing the cost of capital and maximizing the value of the company (Hermanns, 2006). The capital structure irrelevance principle from Modigliani and Miller (1958) laid the foundation for further research on the optimal capital structure within the finance field. Till today, different theories have arisen, the most famous ones are probably the Trade-Off-Theory by Kraus and Litzenberger (1973), the Pecking-Order-Theory by Myers and Majluf (1984), and the latest dynamic approaches, for example, the Market-Timing-Theory by Baker and Wurgler (2002).

According to the traditional view, the capital structure choice is entirely rational (Hens & Wang, 2007). The capital structure irrelevance principle assumes a perfect market, without taxes, without costs for information and transactions, and no risk and expenses for financial distress; so, the choice of the capital structure is irrelevant for the company's value (Modigliani & Miller, 1958). Even though there is no perfect market, their theorems are still valued today. The following Capital-structure theories tried to include these market imperfections, such as taxes, transaction costs, costs for financial distress, and unevenly distributed information.¹²

The question arises whether the theoretical discussion about the optimum capital structure has created an established model. Pursuing, it can be held that until today and despite an over sixty-year-old research field, there has not been a final, universal explanatory model for the capital structure of a company. The fact that no two companies are the same, and the fact that, after many years of discussion, a large number of complex, partially observable, and partly unobservable factors influence the capital structure, has led to the understanding that the future

¹ Whereas the Trade-Off-Theory by Kraus and Litzenberger (1973) included taxes and financial distress in their model, Myers and Majluf (1984) added in the Pecking-Order-Theory, an individual ranking of capital chose. The newest approaches is following a dynamic concept of capital structure adjustment. The two main theories here are the Window-of-Opportunity approach, and the Market-Timing-Theory by Baker and Wurgler (2002), which involved the external capital market and the timing about the choice of the perfect funding.

² These theories will be further treated at chapter 2.1

will not arise a general explanation of the capital structure valid theory (Hermanns, 2006). The financial scientist Myers (2001) concluded after decades of dealing with this topic: “There is no universal theory of the debt-equity choice and no reason to expect one.” (p. 81).

The historically almost exclusively theoretical discussion has given way to a more pragmatic and realistic approach in recent years, in which individual aspects relevant to the capital structure are increasingly being theoretically studied and empirically checked.

Surprisingly, all these financial theories do not analyze the role of the CEO/TMT and its impact on the capital structure of the firm. Even though that the CEO’s and the upper echelon of the firm have an unquestionable impact on the firm’s decisions and actions (Hambrick & Mason, 1984) and they usually have a very concrete idea about the capital structure in their company (Spiecker-Lampe, 2018), he/she does not play an essential role in all of these capital structure theories.

In that sense, the Agency Theory by Jensen and Meckling (1976) - focused on the conflicts between owners and managers and the information asymmetries - included them in their model. They expanded the capital structure question to a question of ownership and management. Agency Theory deals in different research parts with the individual behind the organization. It presents significant evidence that an individual manager has a substantial influence on the company and, therefore, on the capital structure. The literature discussed different models and hypotheses which deal with the same background idea, the opinion that the “agent” has a different idea about the “best strategy” for the company than the “principal”, till today. Shoaib and Siddiqui (2022) confirm a strong relationship between the manger and the capital structure and firm performance and follow the agency theory instead of the trade-off theory or pecking order theory.

This influence is also captured in the Upper Echelons Theory (hereinafter UET) by Hambrick and Mason (1984). The CEO/Top Managers influence the organization, its actions, and behaviors in a certain way. In their approach, Hambrick and Manson deal, for example, with the socioeconomic backgrounds as a significant connection between decisions of the CEO and the strategy of the firm. Furthermore, many researchers have shown that this influence is even more significant when dealing with small local firms (Dolz, Iborra, & Safon, 2019).

However, the UET is frequently used in connection with other theories to show a higher explanatory power. In their theoretical review, Nielsen (2010) reviews 60 journal articles from 1984 – 2005, using the UET and states that the upper echelons’ research is increasingly multidisciplinary. For example, Nielsen and Nielsen (2013) connect the Institutional-Economics Theory from North (1990) with the UET to show the secure connection between

the individual, organizational, and institutional levels. Following this approach, the present research connects the UET with the Institutional Theory to display the vital relationship between the institutional, corporate, and individual levels.

The proposals of both theories are even more significant for Small and Medium Size Enterprises (hereinafter SME) (Berthod, 2016). SMEs are an essential part of a local economy and, therefore, they are connected with local customers, suppliers, financiers, and stakeholders in general. So, their employees, and their essential actors, including the CEO and TMTs, are usually deeply connected in the community, including all the privileges and obligations. Therefore, their individual values – such as sincerity, modesty, honesty, diligence, conscientiousness, and reliability – are influenced by institutional values. Furthermore, these values seem to have an essential stake for risk aversion and ethical behavior. Meyer and Rowan (1977) state that social processes, obligations, or actualities that come to take a rule-like status in social thought or action influence individuals, and Scott (2017) adds that symbolic and behavioral systems contain representational, constitutional, and normative rules, together with regulatory mechanisms that define a universal meaning system and give rise to distinctive actors (individuals) and their action routines. These arguments are the foundation of the Institutional Theory.

Heading back to the capital structure of companies and their structure, it appears that the individual manager seems to have an enormous influence on this structure; institutional values and norms influence managers and their surroundings. This points out that the traditional view, that decisions and financial choices are made with rational economic calculations and a narrow focus (Hens & Wang, 2007), need to consider relevant and forgotten actors. Thus, the role of individual values, and institutional values and norms on decisions and financial choices demand researchers' attention.

In that sense, the cultural field is one of the significant influences connecting this decision-making being an essential dimension of Institutional Theory and UET; even more, the cultural area has been present in financial research. The first literature relating financial decision-making with culture reaches back to Smith (1776) and Weber (1905) to the literal roots of finance and culture, including religion. During the last decade, there has been a growing body of literature in this field, connecting financial research and culture in different research areas of the economic field. The main aim is to show the disconnection of decision making – mainly on data in financial statements and their calculated ratios – with social norms surrounding these companies and connecting them to different other actualities. Aggarwal and colleagues, for

instance, present in various studies that culture, trust, and transaction costs are deeply linked to financial choices (Aggarwal & Goodell (2010), (2014)a, (2014)b, and Aggarwal et al. (2016)). However, culture is a dynamic concept in a flowing status caused by social development and transformation (Kühnen, 2015). For example, Maridal (2013) defines Culture as “society’s beliefs and value system”, Licht (2001) argues that Culture is the “mother of all path dependencies”, and Hofstede and Bond (1988) describe Culture as the way people think, feel, and act, including values, beliefs, behaviors, education, manners, and arts. Nowadays, there appear different and mainly used Culture models, some of them belonging to the historical theories - Kluckhohn and Strodtbeck (1961) and Hall and Hall (1990) were based on different literature researches and mainly came from anthropologists and ethnologists – and others, to the modern theories (Reimer, 2005) – e.g., the Culture Map from Erin Meyer (2014), from Trompenaars (2005), Schwartz (1999), GLOBE Study (Global Leadership & Organizational Behavior Effectiveness) Foundation (2018), World Values Survey (2018), and Hofstede (2001).

The most well-known and cited is the cultural model from Hofstede (2001), wherefore the present study uses these Culture classifications. From Hofstede’s six essential dimensions (power distance, uncertainty avoidance, collectivism versus individualism, femininity versus masculinity, long-term orientation, and indulgence vs. restraint), some of these dimensions are specifically connected with financial decision making. The latest literature presents mainly three cultural variables from Hofstede and variables with similar meanings from the other theories³, that have an essential influence on financial decision-making in general and more closely on a firm’s capital structure. Tested together, they do not show any statistically significant correlation, implying that each variable captures a different dimension of national Culture (Mourouzidou-Damtsa, Milidonis, & Stathopoulos, 2019).

In that sense, the dimensions of individualism, uncertain avoidance, and long-term orientation have been connected by various researchers with financial research. Individualism pertains to societies where there are loose ties between individuals, in contrast to collectivism, which belongs to Cultures where people look after themselves, have healthy relationships and behave cohesively (Haq, Hu, Faff, & Pathan, 2018). Mourouzidou-Damtsa et al. (2019) present with their results a positive association between individualism and bank risk-taking. Haq et al. (2018) find that cultures with high individualism hold more leverage. Uncertainty-avoidance measures

³ Compare Table 6: Summary and comparison of the cultural dimensions; Source: Authors’ compilation based and further developed on Reimer (2005)

to which degree individuals feel comfortable with ambiguity as members of society (Hofstede, 1984). Commonly scientific research has shown that bank-risk-taking is negatively related to a high uncertainty-avoidance (Ashraf, Zheng, & Arshad, 2016). Long-term orientation, on the contrary, is mainly based on the “Confucian thinking”, which implies to preferably have long-term success, including goals and thrift (Hofstede, 2001), and researchers state that firms in countries with high long-term orientation tend to have less leverage (Wang & Esqueda, 2014). So, this thesis argues that culture allows us to analyze the influence of values on financial decision-making – through Institutional Theory and UET-, but values and beliefs need to consider other relevant influences, specifically, the role of religion on financial decision making. Moreover, there is another strong influence on the culture itself and, therefore, on the other mentioned theories.

Hence, looking a step beyond these cultural relations, there seems to be a strong influence on culture and religion. Terpstra and Kenneth state: “Certainly, religion is a mainspring of Culture. In any Culture, some references to an unprovable order of reality (divinity, historical dialectic, nationalism) justify patterns of authority and patterns of equal or unequal exchange among the members of society. Educational systems, political organizations, and social relations, such as the role of women, are all significantly affected by a society’s religion. Religion also has an impact on the practical level of the business firm.” (Terpstra & Kenneth, 1991, p. 72).

With these words, Terpstra and Kenneth summarize the early (the 1970s-1990s) literature connecting religion as a cultural feature among anthropologists (Baal, 1971) and organization scholars (Gomez-Mejia, 1984), among others. This research line has developed into a major research stream. On the one hand, in connection to culture, such as Stulz and Williamson, (2003) who find that: “Culture can affect finance through at least three channels. First, the values that are predominant in a country depend on its Culture. For example, charging interest can be a sin in one religion but not in another. Second, Culture affects institutions. For instance, the legal system is influenced by cultural values. Third, Culture affects how resources are allocated in an economy. Religions that encourage spending on churches or guns takes resources away from investment in production.” (Stulz & Williamson, 2003, p. 313). By mentioning religion as “a common proxy for Culture”, Stulz and Williamson (2003, p. 315) are following La Porta et al. (1999) who connected culture, law, and religion in their studies.

Detached from the general cultural dimensions and values, religion and its influence are tested individually with various decision-making. Some of this research compares general religious- and nonreligious; others focus on the impact of a different faith that is tested individually, such as Christianity, Islam, Hinduism, Buddhism, compared to the nonreligious target group; in other

cases, different religions are tested against each other, for example, western religions vs. eastern religions; in this case, there is a further stream that divides Christianity into their two main parts and states the difference between Catholic and Protestant believers. In respect to its impact on financial decision-making, for example, He and Hu (2016) find evidence that bank loan terms differ for companies in areas with a different level of religiosity. Values such as risk aversion, ethical behavior, and honesty play an essential role for borrowers and lenders. These values are connected to religiosity, which leads to the assumption that they will be charged less interest. Cai and Shi (2017) document that firms in less religious areas have higher debt financing and a worse credit rating than companies in more religious areas. Other studies present evidence that banks in more religious areas have lower risk and hold safer assets, which leads to a better rating (Adhikari & Agrawal, 2016).

Based on this research, the present study argues that there seems to be a connection between culture and religion on individuals' financial decision-making, leading to the difference in capital structures and risk-taking in organizations. Furthermore, this thesis states that this should be mainly visible in SME firms where the impact of the CEO and the TMT on firm decisions is more evident as it is the impact of locals referring to local norms and values - as other researchers find that international firms and MNE are primarily driven by other more "global" factors and managed by foreign managers and TMT's (Mourouzidou-Damtsa, Milidonis, & Stathopoulos, 2019).

In summary, it can be said that the capital market theories have their standing in the academic literature and are still used for examining the capital structure in models of large companies. However, in connection with the applicable decision-making theories, such as the UET and the Institutional Theory, and its influence on SME's they fell short. This applies, even more when other influences enter the model, such as, and among other things, the combination with cultural values and the association with religious influences. These connections have so far not been adequately considered in financial science research.

While SMEs are the backbone of the European economy and that a large part of the financing granted falls on these firms, there is an even larger lack of current and empirical knowledge of capital structures, their influencing factors, and the current financing behavior of small- and medium-sized entities in Pan-Europe.

Therefore, this present research contributes to the capital market theories that examine the capital structure of companies, extending their model to consider the role of culture and religion and their impact on the financial behavior of SMEs. For developing this model, it relies on Institutional Theory and UET, stating that the environment of culture and religion in which

managers are embedded impacts their decision processes and, in so, their financial choices and consequently the capital structure of the firm. More precisely, the present study concentrates on the abovementioned, cultural values from Hofstede (2001), in connection with the level of Christians, the percentage of Protestantism and Catholicism in 24 Pan-European countries.

Overall, the key question is: to what extent is there a different preference in the capital structure and risk-taking and whether and to what extent the underlying culture and/or religion influences this. So, in other words, do culture and religious characteristics in different European countries impact the financing behavior or the capital structure of SMEs?

1.2 Categorization and Structure of the Thesis

The thesis aims to first present the most influential models of financial theory for the optimal capital structure and evaluate them in terms of their practical relevance. Based on this, different approaches are considered and assessed by strategic management and the most relevant theories concerning the influence on capital structure, followed by an overview of the current cultural definitions. As a result, the influence of culture and religion on individual, organizational, and institutional behavior is considered and evaluated. Building on this, a classification of the most important influencing factors of the capital structure is to be developed. Based on the results mentioned above, an empirical study on capital structure, risk-taking, and influencing factors is finally carried out, which should provide conclusions on the financing behavior of SMEs in Europe.

Against the background of more than sixty years of dealing with the theory of capital structure and the corresponding number of theoretical and empirical publications, it should be noted that within the scope of this work, there is only a selective presentation of the previous theoretical and empirical results on capital structure, connecting strategy theories, cultural models, and religious researches and its influences on capital structure. These are based on the importance of the respective research branch for further developing the theory, model, and hypothesis within this thesis and for practical relevance. Consequently, a comprehensive assessment of all publications and approaches related to the theory of capital structure is not possible in the context of this work.

Also, it should be noted that the literature on the theory of capital structure in all relevant financial science versions is very USA-dominated. Furthermore, this literature deals, therefore, mainly with large corporations, who have a broadly diversified shareholder structure and good access to the capital markets.

Due to the complexity of the capital structure theories, various economic approaches for more precise classification, such as neo-institutionalism, are dealt with in the following explanations. Additionally, related topics in finance and economics such as company valuation, the cost of capital, and the decision on the capital structure are an integral part of individual theoretical approaches to the capital structure. Many of related topics and aspects are dealt with or explained in the scope of this work to the extent necessary to illustrate the problem of the optimal capital structure. Consequently, a differentiated and comprehensive presentation is not possible.

The present work is divided into five further parts:

Chapter 2 presents the general literature review of all the needed theories and influences, which are essential for further developing of the present thesis. It begins with the fundamental classical financial theories on capital structure and critically evaluates them. The starting point is the presentation and differentiation of equity and debt. The capital structure models are then arranged in time before the actual capital structure theories' detailed submission begins. It starts with the well-known Irrelevance Theorem from Modigliani and Miller from 1958, which postulates the irrelevance of financing decisions assuming a perfect market. Accordingly, the choice of financing has no impact on the company's value and is, therefore, irrelevant. The following classic theories on capital structure focus on integrating market imperfections into the theoretical models. The Trade-Off-Theory postulates that companies have a target capital structure considering the advantages and disadvantages of increasing debt. The optimal capital structure is dominated by balancing two opposing effects caused by the tax advantages of debt financing and the bankruptcy costs. This is followed by an overview of the Pecking-Order-Theory, which assumes a specific hierarchy of financing preferences. After this, the required financing is chosen after the least resistance. Then the Dynamic Capital Structure Approach is examined in more detail, with the two associated Windows of Opportunity and Market Timing Theories, which assume a particular temporal advantage of raising capital. In the last part of this first subsection, the thematic of the Local Investing and Home Bias is discussed in order to present and explain the financial science results of regional investing, followed by a summary. Next, strategy management theories are treated in some detail. This begins with the best-known agency theoretical approaches. The Principal-Agency Theory describes the essential conflicts and the associated costs of the different contracting parties and their effects on the capital structure. The approaches are differentiated according to two types of disputes. In essence, conflicts between shareholders and creditors cause agency costs of debt, and conflicts between shareholders and managers lead to agency costs of equity. In the following, the approaches

based on asymmetrical information distribution are discussed. The UET is presented based on the assumption that an unequal level of information among the contracting parties leads to an opportunistic behavior of the better-informed contracting party. In addition, this study provides an overlook of the UET. Hambrick and Mason's theory clarifies that "organizational outcomes - strategic choices and performance levels - are partially predicted by managerial background characteristics" (Hambrick & Mason, 1984, p. 193). These backgrounds are, for example, experience, education, and socioeconomic background. As a complementary proposal, the Institutional Theory is discussed in some detail, which illuminates the influence of the institutions on the individual and shows that the individual is strongly influenced by institutional norms and values. This literature allows us to connect the individual and institutional behavior to the individuals' national (Nielsen & Nielsen, 2013).

The following section presents and critically examines the influence of national culture on finance. After a short introduction, the historical definition of culture and its main theories from Kluckhohn and Strodtbeck (1961) and Hall and Hall (1990) will be discussed and displayed. Afterward, the main modern culture theories will be individually displayed. These six approaches are: firstly, from Trompenaars (2005), secondly the Schwartz Value Types (1999), thirdly Meyers Cultural Map (2014), fourthly the GLOBE studies, and fifthly the World Values Survey. Lastly, this study describes the cultural dimensions of Hofstede, the classical theory, and mostly cited nowadays. Furthermore, there will be a comparison conclusion of the different cultural approaches and theories in the end. This section ends up defining the influence of culture on a firm's performance and the capital structure and a general conclusion about this part, leading to the connection of the influence of religion on culture.

Knowing that religion is an important influencing factor of culture, the influence of religion in finance is discussed in the next and last section of this chapter. This part is divided into three primary influencing levels. First, the influence of religion on the individual, second, the influence of religion on the organization, and third, the influence of religion on the institutions. As a result, the majority of the literature finds an impact of religion on capital structure and risk-taking. Here, the focus will end funnel-shaped with the influence of religion (Christianity) and the two main Christian faiths, Catholicism and Protestantism, and their connection to financial decisions.

Based on chapter 2, chapter 3 provides a classification and evaluation of the most important influencing factors on the capital structure and risk-taking of SMEs allowing a detailed justification of their relevance for the hypothesis of this thesis. Summarizing the most important influences, the first part of this chapter deals with developing the research model of this study.

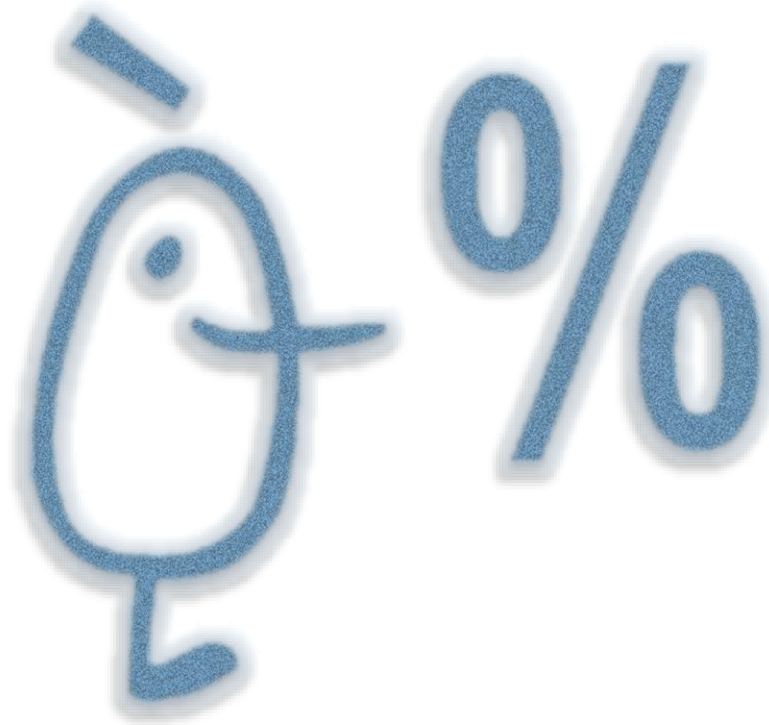
Therefore, the model will be developed through the same structure from the second chapter, and the final model will be developed step by step.

Afterward, the hypotheses will be derived in three steps. Firstly, with the development of the hypothesis, which treats culture's influence on the capital structure of SMEs. Secondly, with the development of the hypothesis, which treats the effect of religion on the SMEs capital structure, and thirdly with the connection of religious affiliation and culture values on the firm's risk exposure. Finally, at the end of this chapter, there will be a short wrap-up and an overview of the concluded hypothesis.

Chapter 4 presents the research methodology, which is divided into two significant main sections. The first part defines the different variables, including the three dependent variables, the various independent variables, and the control variables on the organizational and institutional level. The second part deals with the definition of the sample and the data collection.

Chapter 5 will start with the descriptive analysis of the data, continues with the display of the multilevel regression analysis in detail, including the calculations and their results, and finishes with a discussion about the results and findings in line and contrast with other studies.

Chapter 6 concludes the work and gives an overview of this present study. It also discusses the contributions of the thesis and provides an overview over the limitations, future lines of research and the academic contribution and managerial implications.



CHAPTER 2

LITERATURE REVIEW OF THE MAIN THEORIES AND RELATIONSHIPS OF CAPITAL STRUCTURE, CULTURE, AND RELIGION

2 LITERATURE REVIEW OF THE MAIN THEORIES AND RELATIONSHIPS OF CAPITAL STRUCTURE, CULTURE, AND RELIGION

The introduction has shown that the existing finance literature has its valid standing point in academia, however falls short in connecting influences such as culture and religion to the capital structure and the choice of capital. Therefore, the aim of this research is, to find the linkage between these institutional influences on the organization. By using theories of strategic management, to explain the influence of institutional values of culture and religion on organizations, and individuals, this paper focuses on the organizational choice of capital structure. In order to reach the needed model, the research field is divided in four individual research areas which are linked together later on. This chapter will consequently deal with the individual literature of these four research areas, describing the theoretical roots of the individual theories and models, as well as earlier results of connecting studies.

The structure is as followed: Firstly, the finance literature will be illuminated. This first part begins with the discussion of the distinction between equity and debt capital, which continues with the influences on the “corporate capital structure” and the critical presentation and analysis of the major theoretical models. The analysis of the capital structure theories for companies, however, seems incomplete for understanding this phenomenon. To fill this gap, the present study will display and discuss, secondly, the body of literature of strategy management. Here the Principal-Agency Theory will be presented first, followed by the UET and the Institutional Theory. Based on this approach, thirdly, the next section will deal with cultural values, including their general models, and theories, and continuing with the connecting of culture with the economic and especially the finance research field. Here, the main approaches will be displayed and commended. One core element in this review is the fact that the predominant existing religion of a country again influences culture as itself.

Therefore, and fourthly, the last part will describe and analyze the literature dealing with the core concept of religion. Furthermore, this study will especially zoom into the linkage between religion and its impact on economics and finance areas at the individual, organizational, and institutional levels. The aim in each of these different levels is to capture the influences of religion on financial decisions and capital structure.

2.1 Capital Structure – Theories and Main Influences

2.1.1 Introduction

Looking at the capital side of the balance sheet, companies always have the decision between equity and debt capital, including all the different shades between those two, such as mezzanine capital, which will not be further led. Over the last decades, many researchers tried to explain the capital structures of firms with different models and aimed to find the answer to one of the most fundamental questions in finance: “What influences the capital structure and is there an optimum capital structure?”. A theoretical overview of the capital structure theories is developed, for example, and among others, by Titman and Wessels (1988), Harris and Raviv (1991), and Herrmanns (2006). However, till today this question is not fully answered. In the following part, the distinction between equity and debt is made, followed by a historical classification of capital structure theories and the presentation of the four major capital structure theories, in modern finance. Additionally, to the capital structure theories there will be a closer look at home bias and local investing in connection with the capital structure of a firm. The end is a critically worthy summary.

2.1.2 Distinction between Equity and Debt Capital

Generally speaking, the difference between equity and debt financing can be categorized into seven different criteria (Perridon, Steiner, & Rathgeber, 2017). In each of these criteria appear different characteristics for equity as well as for debt capital. Fundamentally, equity and debt capital are distinguished into the following categories:

1. The legal position of investors
2. Liability for losses of the company
3. Participation in management
4. Temporary availability
5. Participation in corporate success
6. Tax treatment
7. Liquidity burden

Table 1 gives an overview of their main differences:

Table 1: Distinction between Equity and Debt Capital; Source: Authors' compilation

Criteria	Equity	Debt Capital
The Legal position of investors	Owner / Stockowner	Creditor
Liability for loss of the company	Full liability; subordinate claim of capital providers in the event of bankruptcy	No liability; priority claim of capital providers in the event of bankruptcy
Participation in management	Right to manage	No right to manage
Temporary availability	Unlimited term	Limited term
Participation in corporate success	Participation in variable profit or loss	Fixed interest, no profit sharing
Tax treatment	Profit taxed	Tax relief through interest payments
Liquidity burden	Distribution only if profit is made	Non-profit (fixed) interest payments

As shown in the table above, there are seven different categories that divide and categorize equity and debt. Participation in management is a major one, as well as the liability for losses of the company, and the temporary availability. All three will be from interest later on.

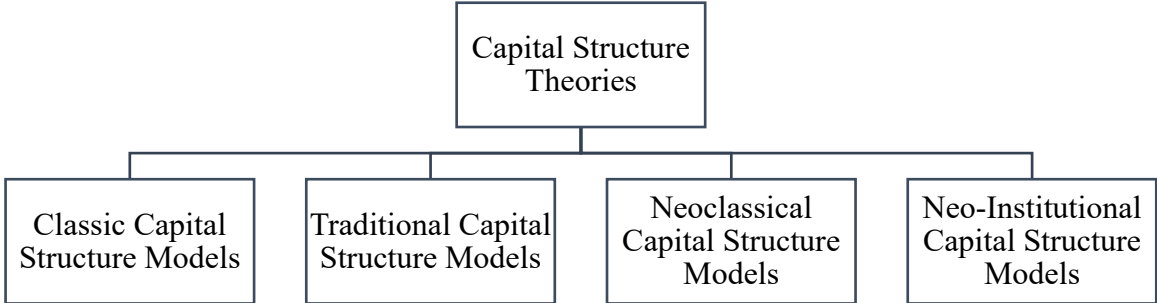
2.1.3 Capital Structure Theories

In general, firms have two main aims when it comes to capital structure. Firstly, they will always try to sustainably optimize their cost of capital, which will affect the capital structure automatically (Spiecker-Lampe, 2018). Secondly, they will maximize the value of the firm, which influences the capital structure as well. The beginning of this research started over 90 years ago by Fisher (1930), followed by Lutz (1951). As a general conclusion, firms should try to reach an optimum debt ratio, to subsidize expensive equity by cheap debt capital (Hermanns, 2006). In theory and depending on the risk sensitivity of the capital providers, -shareholders, and debt providers- the average total cost of capital can be minimized, or the market value of the company can be maximized, thereby optimizing the capital structure.

Starting initially, the capital structure theories can be categorized into different groups. One of these classifications delivers from Perridon et al. (2017). They classify them into four categories:

- 1. Classic Capital Structure Models
- 2. Traditional Capital Structure Models
- 3. Neoclassical Capital Structure Models
- 4. Neo-Institutional Capital Structure Models

Figure 1: Capital Structure Theories: Authors’ compilation based on Perridon et al. (2017, p. 560);



The classic capital structure models assume a perfect Capital market. This means that all the market participants have the same information, are well informed, and can invest or borrow as much money as they want. The capital structure does not influence on the cost of capital. Researchers use these theoretical markets to modelized their models. Their assumptions are usually introduced with the sentences about “complete”, “efficient”, and “perfect” capital markets such as: “In complete and perfect capital markets [..]” (Kraus & Litzenberger, 1973, p. 911) or as Fama (1970) writes “A market in which prices always “fully reflect” available information is called “efficient.” (p. 383).

In the traditional capital structure models, capital providers are no longer risk-neutral. Uncertainty and outdated capital market interest rates are the rule. Based on this, a potential optimal capital structure for companies can be formulated. It must be assumed here that the return claims are formulated depending on the risk. The models are based on two optimality criteria: the maximization of market value and the minimization of capital costs.

In neoclassical capital structure models, on the other hand, the thesis of "irrelevance of the capital structure" can be found. This means that a company's leverage has no impact on the cost

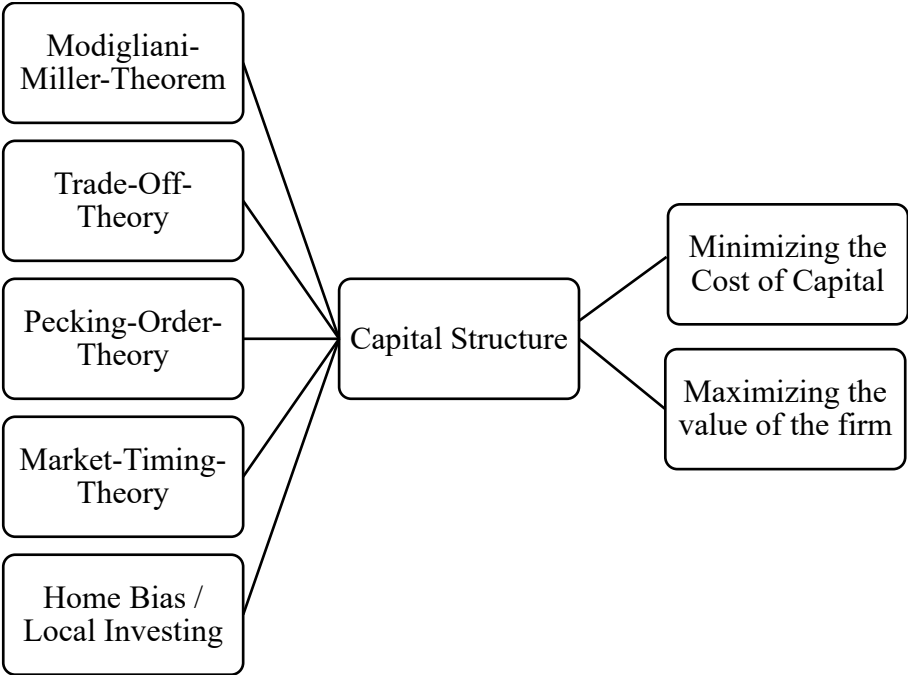
of capital or market value. Besides, the distribution policy is also of no importance. The pioneers here were Modigliani and Miller (1958).

The latest perspective is the neo-institutional capital structure models that take up the criticisms of the neoclassical approaches and try to make more realistic assumptions. These include information asymmetry, insolvency costs, and divergences of interest between equity and debt providers. The beginnings started here were Jensen and Meckling (1976) and Myers and Majluf (1984).

However, all of these theories deal on how firms must make their choices but until today these prescriptive models or normative models do not give a precise description on how. Therefore, the core question, which needs to be answered, how companies choose their capital structure, is “almost” impossible to answer. Myers (1984), for example, states: “I will start by asking, “How do firms choose their capital structures?” Again, the answer is, “We do not know.” [...] We know very little about capital structure. We do not know how firms choose the debt, equity or hybrid securities they issue. We have only recently discovered that capital structure changes convey information to investors. [...] Our theories do not seem to explain actual financing behavior, and it seems presumptuous to advise firms on optimal capital structure when we are so far from explaining actual decisions.” (p. 575).

In conclusion, 36 years later, after Myers’s statement, this question is not fully answered, and there has not been a result of an ideal capital structure. However, and regardless of all doubts, there have been three additional main capital structure theories during the last sixty years since Franco Modigliani and Merton Miller introduced the capital structure irrelevance principle. Furthermore, there have been some general conclusions, where researchers tried to identify single influences on top of the exciting theories (Weston, 1989). Additionally, the home bias in investing/receiving equity or debt and local investing have been from scientific relevance on the influence on capital structure in the economic and financial research. The following graphic shows an overview. All of the listed theories and influences which are displayed here will be individually presented in the next sections.

Figure 2: Financial theories and factors which influences the Capital Structure: Source: Authors' compilation



2.1.3.1 The Modigliani-Miller-Theorem

Franco Modigliani and Merton Miller presented an academic essay about “The Cost of Capital, Corporation Finance and the Theory of Investment” in 1958. The leading and pioneering result was that under certain conceptions, there is no optimal capital structure in an exemplary capital market. The capital structure is irrelevant, and there is no current optimum debt ratio, to subsidize expensive equity by cheap debt capital. Furthermore, their findings indicate that the capital structure is irrelevant for rational decision-making to, “namely (1) the maximization of profits and (2) the maximization of market value. (Modigliani & Miller, 1958, pp. 261-262). Later on, Franco Modigliani (1988) referenced that he was inspired by a publication from Durand (1952) for the Theorems. In 1990 Merton Miller won a Noble Prize for his fundamental scientific contributions to the theory of corporate finance”.⁴

⁴ Franco Modigliani won a Noble Prize in 1985 as well, however, for his “pioneering analysis of the saving behavior of the financial markets“.

2.1.3.1.1 Conceptions and Propositions

The Irrelevance Theory was conceived as a neoclassical capital structure model and is based on the existence of a complete capital market. Furthermore, Modigliani and Miller (1958, p. 265 ff.) found their theory on the following assumptions:

- Perfect capital markets - the capital markets are free of friction - there is no unequal/limited access to the market.
- The shareholder value approach determines the market value of a company.
- There is a partial balance: Future results for the period are uncertain. However, the winners expect an individual average period profit for the company.
- There is a risk-free, uniform interest rate at which capital can be invested or raised in any amount without transaction costs. A constant level of investment opportunities for investors is assumed.
- There is no risk of bankruptcy and, therefore, no bankruptcy costs - debt is risk-free.
- There are only two risk classes: risk-free bonds and risky stocks.
- The companies are all in the same risk class.
- There are no taxes differentiating between the forms of capital.
- All payment streams flow to infinity.
- There is no asymmetry of information; all actors have the same level of knowledge.
- The investment policy is given.
- There is only one period considered.

Investment decisions are detached from their financing sources. In other words: The way a company finances its investments and operations should not affect the value of the project or the company as a whole. In their model, Modigliani & Miller state in three propositions (Theorems) that the capital structure of a company does not affect the value of the company and the wealth position of the owners (Modigliani & Miller, 1958). These three Theorems are more precise:

- Firstly, the total value of a company is given an investment program and thus a given expected value of the successes on a perfect capital market in balance regardless of the capital structure. Therefore, the cost of capital cannot be optimized.
- Secondly, the expected value of the return required by the shareholders is a linear function of the company's gearing. This means that, in other words, if the debt of a company would increase proportionately, shareholders would ask for an increased premium for their equity investment as well.

- Thirdly, the total or average cost of capital used as a discount rate for the benefit assessment is independent of how these objects are financed.

Furthermore, they find that the capital structure does not have an impact on the dividend policy, growth, and the valuation of shares (Miller & Modigliani, 1961).

2.1.3.1.2 Acknowledgement and Critic

As groundbreaking, Modigliani and Miller's results were, nevertheless, sparked an outstanding discussion about the contradiction to entrepreneurial practice (Breuer, 1998). In particular, the introduction of corporate taxes or, in general, tax unequal treatment of the sources of finance equity and debt capital has a far-reaching influence on the statement of the model. Many corporate value-enhancing strategies are based on the tax advantage of debt financing ("leverage effect"), e.g., for buy-out transactions. Moreover, bankruptcy costs are not included, and the fact that information are unequally spread for different (size) investors. Modigliani & Miller "corrected their model to take into account these critics" five years later by themselves. In the following research paper, they included the influence of taxes. They stated: "The purpose of this communication is to correct an error in our paper "The Cost of Capital, Corporation Finance and the Theory of Investment." (Modigliani & Miller, 1963, p. 433). They conclude that the use of outside capital can lower the capital costs of a company. Although the deductibility of interest payments purely mathematically suggests corporate debt of 99.9%. Continuing, they note that the tax advantage of debt financing should not necessarily serve as an argument for high corporate debt. The funding from retained earnings may be cheaper than external financing. Furthermore, access to outside capital is generally limited. Ultimately, they point out that various factors or costs may appear in reality that are not ascertainable with the equilibrium model, but contradict the argument that debt is as high as possible (Modigliani & Miller, 1963).

Another critic was that they did not take financial distress and the cost of bankruptcy into account (Robichek & Myers, 1966). Baxter (1967), for example, argued that the excessive use of leverage (99.9%) could expect to raise the cost of capital for the firm. Furthermore, the criticism went against the asymmetry of information, the missing transaction costs, and the entirely rational acting investors. Last but not least, the assumption points out that an investor would not ask for a lower or higher return by taking a lower or higher risk by using equity or debt capital.

With the publication of the Irrelevance Theory, Modigliani and Miller did not claim to explain the entire capital structure, but rather to focus on possible influencing factors. This intention was also confirmed by Merton Miller (1988) in a post "The Modigliani-Miller Propositions After Thirty Years" published thirty years later with the statement: "... what does not matter can also show, by implication, what does ". In the original paper from 1958, Modigliani and Miller already pointed out that the very restrictive assumptions they made can undoubtedly be assessed with greater realism and prompted an active discussion about this. Two researchers who followed this request were Hirshleifer and Sharpe. Hirshleifer (1966) verified the Irrelevance Theory by the Time-State-Preference-Model, and Sharpe (1964) confirmed it with the Capital-Asset-Preference-Mode. Dhaliwal et al. (2006), for example, expanded the model and concluded that "the cost of equity capital can be expressed as a function of leverage and corporate and investor level taxes." (Dhaliwal, Heitzman, & Zhen Li, 2006, p. 691).

The meaning of the theses published by Modigliani and Miller is not so much to be seen in the proof of irrelevance itself but in the justification of a paradigm shift (Stiglitz, 1988). Ironically, while the classic structure of finance was only valued as a means to an end, the irrelevance theorem put forward by Modigliani and Miller with the thesis that the capital structure was ignored caused the economists to take a close look at it, just like this present thesis.

In this respect, Modigliani and Miller's contribution rightly counts as the birth of modern corporate finance research, and until today, the Irrelevance Theory is used as an underlying model with extensions (Stulz, 2000).

2.1.3.2 The Trade-Off-Theory

The Trade-Off-Theory goes back to Kraus and Litzenberger (1973)⁵ and is based on the first Theorem of Modigliani and Miller. It disagrees with the perfect market assumption from Modigliani and Miller. However, and after the theoretical examination of the capital structure theory by Modigliani & Miller, the factors taxes and bankruptcy were the market imperfections that were added in the Trade-Off-Theory and which lead to a deviation from the premise of the perfect market.

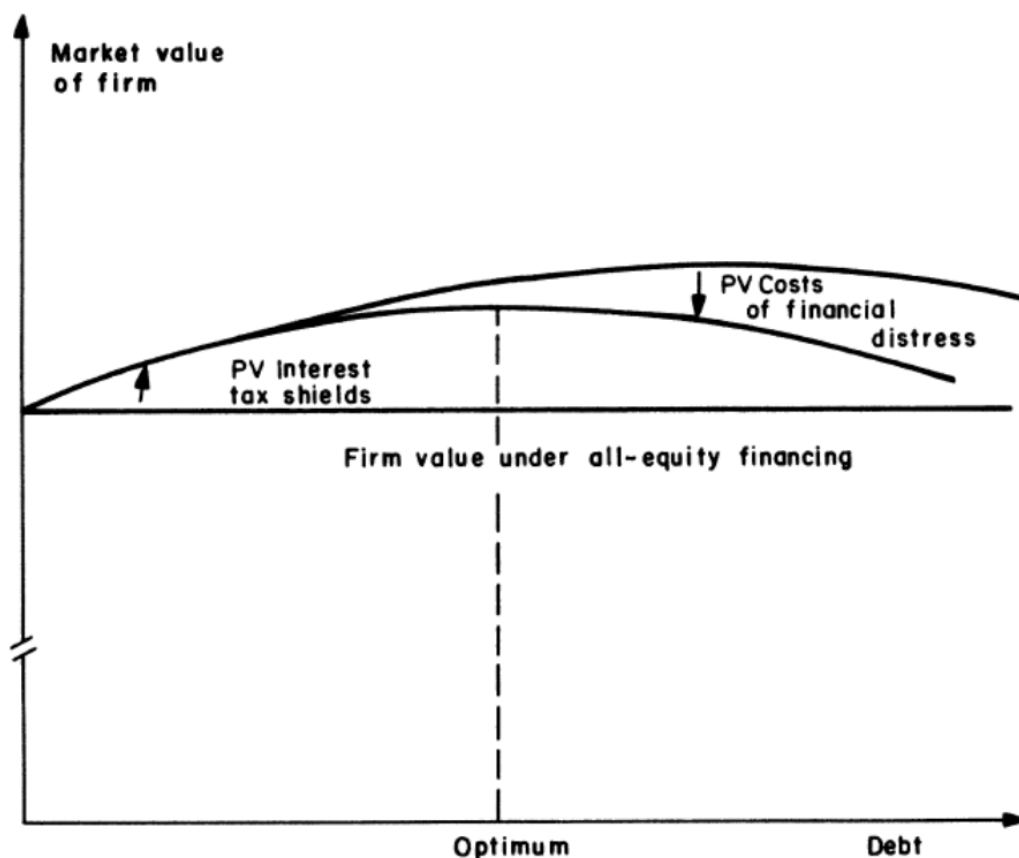
⁵ Other researchers added essential contributions to the theory as well, for instance, and among others: Miller (1976), Scott (1976), Taggart (Taggart, 1977), and Kim (1978).

2.1.3.2.1 Conceptions and Propositions

In the assumption of the Trade-Off-Theory, the market is not perfect and rational, but rather imperfect. Therefore, they include default payments and taxes in their model. Consequently, firms will always choose their debt-equity ratio according to their maximum advantage, including minimum costs and maximal profit (Kraus & Litzenberger, 1973). The main aim of the theory is the tax shield, which should be calculated as high as possible, and the costs for financial distresses as small as possible.

In theory, taxes are high, and the risk of bankruptcy is low. Therefore, the debt should be as high as possible to maximize the tax shield effect. Depending on the characteristics of the companies, the Trade-Off-Theory assumes a particular target capital structure (Brealey, Myers, & Allen, 2007). The following graph shows the model and the “optimum capital structure”.

Figure 3: The Statistic Trade-Off-Theory of capital structure; Source: Myers (1984, p. 577)



Myers (1984) states that if the capital structure of a company is removed from the optimal capital structure by random events, the Trade-Off-Theory makes an immediate readjustment. Due to the determination of a fixed target capital structure and the reduction of the financing

task to compensate for random deviations from the optimum, the Trade-Off-Theory is often referred to as a static Trade-Off-Theory. Fama & French describe the model as followed: “In the trade-off model, firms identify their optimal leverage by weighing the costs and benefits of an additional dollar of debt. The benefits of debt include, for example, the tax-deductibility of interest and the reduction of free cash flow problems. The costs of debt include potential bankruptcy costs and agency conflicts between stockholders and bondholders. At the leverage optimum, the benefit of the last dollar of debt offsets the cost. The trade-off-model makes a similar prediction about dividends. Firms maximize value by selecting the dividend payout that equates the costs and benefits of the last dollar of dividends.” (Fama & French, 2002, pp. 1-2).

2.1.3.2.2 Acknowledgement and Critic

Nevertheless, and although the Trade-Off-Theory is including more variables, it is often criticized. Miller (1976), for example, is comparing the “balancing” of equity and debt with a “horse-and-rabbit stew – one horse and one rabbit” (p. 264). In his view, taxes are high, and the risk of insolvency is rather low, the leverage-effect should be significantly higher in reality.

In addition to this critic, Faulkender and Petersen (2006) add that the Trade-Off-Theory implicitly assumes that capital availability solely depends on the company and its characteristics. However, their evidence shows that institutions that are able to trade on the public bond markets have different opportunities than small firms. They show that the Trade-Off-Theory fails for small firms, who do not have access to the financial market and have to take loans from rather “expensive” local banks. In conclusion, they present that large firms have 35% more debt on average than small ones (Faulkender & Petersen, 2006).

Moreover, Welch (2004) states that the effect of share prices is more relevant to explain the debt-to-equity ratio than the tax shield and financial distress of the Trade-Off-Theory. In his tests, stock returns explain about 40 percent of debt ratio dynamics.

With the aim of justifying the relevance of entrepreneurial financing decisions, the Trade-Off-Theory is characterized by the integration of market imperfections in the form of taxes and bankruptcy costs in a capital structure model (Hermanns, 2006). Because of the understandable logic, the Trade-Off-Theory initially won many supporters, as Kraus and Litzenberger (1973), Miller (1976), Scott (1976), Taggart (Taggart, 1977), and Kim (1978).

Similar to the Modigliani-Miller-Theorem, the Trade-Off-Theory was used as a foundation for other models with a variety of additional factors. Harris and Raviv (1991), for instance, added

agency costs to the model. Overall, the theory has limitations but still explains certain aspects in empirically tested capital structures.⁶

2.1.3.3 The Pecking-Order-Theory

The Pecking-Order-Theory, first introduced and mentioned by Donaldson (1961), was later refined by Myers⁷ and Majluf (1984). The theory explains that financing sources will be chosen by way of the least resistance. In core, the approach is based on an institutional separation between capital owners and capital managers as well as asymmetrical information between the two groups. Therefore, this financial theory is close to the Principal-Agent-Theory by Jensen and Meckling (1976)⁸.

2.1.3.3.1 Conceptions and Propositions

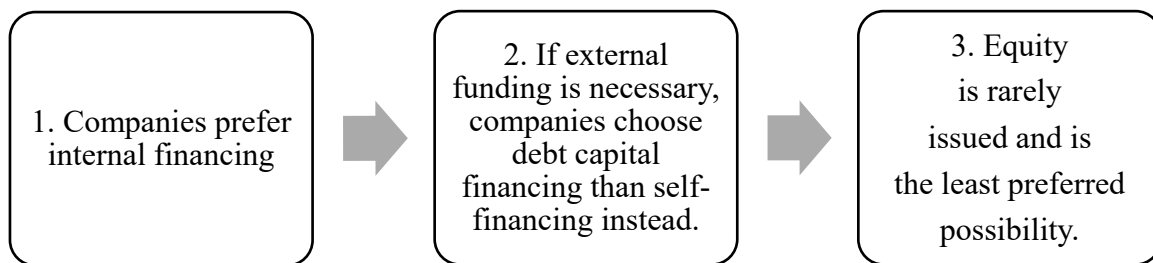
Myers and Majluf (1984) define clear financing preferences of companies. In the Pecking-Order-Theory there are subject to a very clear order or hierarchy, which means that firms will, first of all, use internal financing such as retention of earnings, then debt capital such as loans from banks, followed by hybrid capital, such as mezzanine, and last of all, as the final option, raising equity. However, the assumption about the raising of equity states that this would be associated with the acceptance of new shareholders since in the other case, the external influence on the company generally would remain unchanged.

⁶ Table 2: Trade-Off-Theory vs. Pecking-Order-Theory: Source: Authors' , provides an overview.

⁷ Since 2017, Myers is on the list for the Noble Prize for his contributions illuminating the dimensions of decisions in corporate finance.

⁸ More detailed information will be given in Chapter 2.2.2 Principal Agency Theory

Figure 4: Financing behavior of companies according to the Pecking-Order-Theory – Source: Authors' compilation based on Myers and Majluf (1984, p. 2019)



Additionally, the Pecking-Order-Theory assumes that managers have more information about the firm than investors, which leads to an information asymmetry, which, in a certain way, connects the theory to the Principal-Agency-Theory.⁹ As a result, they disagree with the Trade-Off-Theory because, in their model, there is no optimum or target capital structure. In fact, the capital structure of a firm is permanently changing. The firm will, therefore, always choose the financing source, which is most attractive for the company and the future development of the company (Börner & Grichnik, 2003).

2.1.3.3.2 Acknowledgement and Critic

The Pecking-Order-Theory analyzes the benefits of equity versus debt capital and internal versus external capital from two perspectives. Firstly, from the managements' view, secondly from the shareholders' view (Hermanns, 2006). Fama and French describe the model as followed: "The pecking order arises if the costs of issuing new securities overwhelm other costs and benefits of dividends and debt. The financing costs that produce pecking order behavior include the transaction costs associated with new issues and the costs that arise because of management's superior information about the firm's prospects and the value of its risky securities. Because of these costs, firms finance new investments first with retained earnings, then with safe debt, then with risky debt, and finally, under duress, with equity. As a result, variation in a firm's leverage is driven not by the trade-off model's costs and benefits of debt,

⁹ More detailed information will be given in Chapter 2.2.2 Principal Agency Theory

but rather by the firm's net cash flows (cash earnings minus investment outlays)." (Fama & French, 2002, pp. 1-2).

Progress of the Pecking-Order-Theory over previous theories like the Trade-Off-Theory is that it rejects the idea of the optimality of the capital structure. According to Myers (2001) and the Pecking-Order-Theory, the capital structure is ultimately the result of the cumulative external financing requirements. The preference of listed companies for internal financing and the low importance of share issues through capital increases were often attributed to the desire of managers to not submit to the discipline of the capital market. According to the Pecking-Order-Theory, this behavior is attributable to the asymmetry of information and the associated information advantage of management concerning to the company value (Myers, 2001). The Pecking-Order-Theory makes it understandable how information asymmetries work and lead to comprehensible statements regarding the financing decisions and structures that can be found in practice. The Pecking-Order-Theory, for example, explains why equity issues are of very little importance as a source of finance for listed companies (McDaniel, Madura, & Akhigbe, 1994).

The Pecking-Order-Theory seems to offer higher explanatory power than the other two theories mentioned above (Shyam-Sunder & Myers, 1999). Shyam-Sunder and Myers (1999) test the alternative of a Pecking-Order-Theory model of corporate financing against traditional capital structure models and find evidence that the Pecking-Order-Theory has the most significant explanatory power of all. Furthermore, Fama and French (2002), test the Trade-Off-Theory against the Pecking-Order-Theory and show that the Pecking-Order-Theory has much higher time series explanatory power than a static trade-off model.

On the contrary, Frank and Goyal (2003) present a study where the results for the tested Pecking-Order-Theory are not robust and state that "financing deficit is less important in explaining net debt issues over time for firms of all sizes" (Frank & Goyal, 2003, p. 217). Hovakimian et al. (2001), present similar results and find evidence that the Trade-Off-Theory has a higher significance than the Pecking-Order-Theory. Table 2 offers an overview of some of the tested Trade-Off-Theory versus the Pecking-Order-Theory,

Table 2: Trade-Off-Theory vs. Pecking-Order-Theory: Source: Authors' compilation

Author	Year	Period	Sample	Pecking-Order-Theory	Trade-Off-Theory	Key Statements
Fama and French	2002	1965-1999	3.000	Significant	Not Significant	More profitable firms have, according to the Pecking-Order-Theory, a lower level of debt.
Frank and Goyal	2003	1971-1998	2.833-7.368	Not Significant	Not tested	Indications of the existence of the pecking order on a small scale for large companies, but not for small ones.
Hovakimian et al.	2001	1979-1997	39.387	Not Significant	Significant	Trade-Off-Theory explains long-term financing behavior, Pecking-Order-Theory explains short-term financing behavior.
Shyam-Sunder and Myers	1999	1971-1989	157	Significant	Not Significant	Pecking-Order-Theory is suitable for explaining the financing behavior of mature companies.

Overall, the Pecking-Order-Theory has influenced the corporate finance field and their quest to find the answer to the questions of the optimum capital structure. In a certain way, this theory offers good explanatory power. However, this is not an overall valid model for most companies.

2.1.3.4 The Dynamic Capital Structure

As in the last chapters seen, the Modigliani-Miller-Theorem and the Trade-Off-Theory have a static capital structure approach. The Pecking-Order-Theory modified this view in a way and offered a non-static capital structure approach. However, all three theories view the optimal capital structure at a certain point in time. None of the three theories take the opportunity that this structure could change into.

However, the financing behavior of companies shows a different behavior. The history of a company and an individual adjustment process in capital structure over time, present a rather dynamic approach (Hermanns, 2006). This adjustment process began in the literature as dynamic adjustment process, continued then as the so-called, Windows-of-Opportunity, and ended up in the Market-Timing-Theory.

2.1.3.4.1 The Dynamic Capital Structure Approach

The beginning of the research stream about this dynamic concepts was laid, among others, by Fisher, et al. (1989), Leland and Toft (1996), Hovakimian et al. (2001), Banerjee et al. (2004). The approach behind the dynamic capital structure adjustment is, according to Jalilvand and Harris (1984), as followed: Companies have some specific behavioral patterns when it comes to their funding needs. Acute financing needs are serviced in the following order: increasing long-term debt, reducing cash, and cash equivalents. Large companies adjust their long-term debt more quickly to the target share of debt as part of adjustment processes and use more long-term debt to finance than smaller companies. Compared to smaller companies, large companies tend to be more reluctant to issue new equity. There are also indications that companies are trying to time long-term debt and equity issues. In anticipation of a future decline in interest rates, companies postpone the issuance of long-term debt and instead increase the proportion of short-term debt or issue equity. The adjustment to the desired equity ratio is achieved more quickly when the share price is high, and there is a tendency to increase funding through share issuance if the share price is considered to be high compared to historical values. Based on the results of their investigations, Jalilvand and Harris conclude that the speed of the adjustment processes to the respective target capital structure varies significantly from company to company. The rate of the adjustment process is primarily determined by the size of the company and the underlying capital market conditions, such as the interest and share price level (Javiland & Harris, 1984). According to Fisher et al. (1989), tend to have large companies with a high effective tax rate and a low bankruptcy risk a narrower range within which the capital structures move. Smaller companies with a lower tax rate and a higher bankruptcy risk have a more comprehensive range (Fischer, Heinkel, & Zechner, 1989).

The theoretical finance literature about the Windows-of-Opportunity was firstly discovered by, and among others, Ritter (1991), Aggerwal and Rivoli (1990), Affleck et al. (1996), and Stehle and Erhardt (1999).

2.1.3.4.2 The Windows-Of-Opportunity Approach

The approach behind the Windows-of-Opportunity is as following: In order to operate successfully on the financial market, management can take advantage of the occasional advantageous capital market and valuation phases due to the informational benefit of the actual company value vis-à-vis investors. If the situation arises that a company's growth prospects

were too optimistic on the market, companies can use this misjudgment by issuing equity. This results in below-average stock exchange performance in the long term (Hermanns, 2006). The hypothesis that companies use intermittent stock market phases that are accompanied by overvaluation has become known in the financial theory literature as "Windows of Opportunity".

The relatively current market timing approaches are based on the Windows of Opportunity approach and develop it further. They examine the influence of market timing, so the extent of opportunistic exploitation of valuations or capital market phases over time by listed companies and its impact on the capital structure (Hermanns, 2006). The focus is on the analysis of equity and debt issuance depending on the underlying stock market valuations and macroeconomic conditions - especially the interest rate level.

2.1.3.4.3 The Market-Time-Theory

The market-time-hypothesis was mainly first introduced by Baker and Wurgler (2002) and held the view that the current capital structure of firms is strongly related to the historical market value. In contrast to the Trade-Off-Theory and the Pecking-Order-Theory, there is not an optimum capital structure or preferred capital source. Consequently, firms generally do not care about financing their assets with debt or equity; they instead consider the market timing and choose the best option at present. As a result, "firms are more likely to issue equity when their market values are high, relative to book and past market values, and to repurchase equity when their market values are low." (Baker & Wurgler, 2002, p. 1). Koraczyk and Levy (2003) invest the capital structure of firms and the connection between macroeconomic factors such as interest rates from American companies and found evidence that there was market timing for debt capital.

Henderson et al. (2004) examined the market timing of global emissions in connection with the capital market and macroeconomic factors and argument that there is a market timing as well. In summary, it can be said that the results indicate that market timing behavior has a lasting effect on the capital structure of companies. The level of debt of a company usually has a significant negative relationship with historical stock market valuations. The influence of past appraisals is robust and very sustainable. According to the results of the investigation, temporary differences in the stock market valuation led to permanent changes in the capital structure, which can have long-lasting effects (Baker & Wurgler, 2002).

In contrast to the general model, Alti (2006) finds a two-level process. In the beginning, “hot-market IPO firms issue substantially more equity and lower their leverage ratios by more than cold-market firms do. However, immediately after going public, hot-market firms increase their leverage ratios by issuing more debt and less equity relative to cold market firms. At the end of the second year following the IPO, the impact of market timing on leverage completely vanishes.” (Alti, 2006, p. 1681). Whereas, Zavertiaeva and Nechaeva (2017) find evidence that firms market time their debt, concerning the past, current, and future interest rates, however not their equity. Moreover, they find a connection to the age of the board of directors. Here they state that younger boards of directors prefer debt financing to equity issuance, which shows the relationship to the UET.

2.1.3.4.4 Acknowledgement and Critic

The analysis of the global market timing behavior concerning the emission behavior gives strong indications that companies worldwide share and bond issues are timing dependent on the market conditions (Henderson, Jegadeesh, & Weisbach, 2004). The analysis of market timing at the company level also allows researchers to make the supposition that companies systematically use the respective stock market valuations and macroeconomic conditions in their emission decisions. Furthermore, some findings suggest that companies that are financially independent and therefore have more options concerning the type and timing of financing demonstrate a particularly pronounced market timing compared to financially dependent companies (Korajczyk & Levy, 2003).

The market timing approaches indicate a significant influence of the market timing behavior in the financing policy (Hermanns, 2006). In summary, it can be said that both the dynamic and the market timing approaches resulting from the Windows of Opportunity approaches have contributed to a significant further development of the theory of capital structure. The progress results in particular from the revision of the previous assumptions of a static capital structure and the acceptance and integration of the realities that can be found, e.g., varying stock market valuations, capital market conditions and macroeconomic conditions, according to which the capital market does not always provide fair prices or conditions.

2.1.4 Local Investing and Home Bias

All four prior discussed theories and approaches have their position in the academic field and are still used in academia and textbooks in corporate finance (Perridon, Steiner, & Rathgeber, 2017). However, the literature has shown that other factors influence the capital structure. A significant research field, which will be from interest for this present research, is local investing and home bias. In the last discussed part, the focus was on the capital structure side of the company. However, not only the request of capital makes a difference in the chosen form of capital. It is also the investor that supplies the company with individual and specific financial options. US companies rather tend to get equity from US Investors, compared to Pan European companies, who are rather financed with debt (Hermanns, 2006). Therefore, the locations of the investor matter as well for the capital structure of a firm. The following part presents some studies which show the influence of local investors on capital structure.

2.1.4.1 The Influences of Local Investors on Capital Structure

In 1991, French and Poterba (1991) displayed a model that investors tend instead to invest their wealth in domestic assets rather than diversify in global investments and lack returns by their missing diversification. Other researchers followed in different studies with similar results. Tesar and Werner (1995), for example, find evidence that the typical U.S. equity portfolio remains strongly biased toward domestic equities, and investors prefer to invest in their “well-known” home market. Lewis (1999) dealt with a similar question; however, it included risk hedging to local stock market crashes. Similar to Tesar and Werner (1995), he finds evidence that through “home bias”, investors lack safety in their portfolios. Carrying on, Dahlquist et al. (2003) find evidence that there is a close relationship between portfolios of small investors and corporate governance, meaning that in countries with poor investor protection, which are far away from the “home market”, instead large institutional investors are invested. Grinblatt and Keloharju (2001) document that Finnish investors rather invest in Finnish firms, which are located closely and communicate in their native tongue. Moreover, they find evidence that the same cultural background of the CEO makes a difference in the investment decisions of investors. However, the results are only significant for small private investors. Departing from this general conclusion of home bias from investors in their whole country, other scholars show that “home bias” is even stronger in more local areas such as states or cities.

Coval and Moskowitz (1999) name the well-documented bias in the U.S. in favor of local securities, the “close to home” investing and Huberman (2001) finds evidence that households instead invest in regional companies where investors are closely related too. This relation could be either through the employment of themselves, family members, or friends. Hong et al. (2004) propose that stock-market participation in general. Still, even stock-market local involvement is influenced by social interaction, for example, those who interact with their neighbors, or attend church together. Cohen et al. (2008) present similar evidence on the security market. They find that social networks influence performance in the security market. Furthermore, the effect of social network investing increases even more in high-social-capital areas (Guiso, Sapienza, & Zingales, 2004).

Malloy (2005) displays that through locally known analysts, who advertise local stocks and impact the price of the stock price, because of an expected better information advantage, shares are rather sold to local investors. Similar results appear for “local” investment banks. Butler (2008) shows that they have a comparative and absolute advantage over nonlocal financial institutions. In his view, local investment banks and their employees have more “soft information”, caused, for example, by knowledge of the local economy, or individual personal relationships. These “soft information” is used to evaluate companies, their stocks, and their inhouse loans. In conclusion, this even leads to a lower cost of debt for companies (Agarwal & Hauswald, 2010).

John et al. (2011) find evidence that this local information advantage applies. In their study, they investigate the impact of geography on firms’ information policy. They state that “distance increases information asymmetries” (John, Knyazeva, & Knyazeva, 2011, p. 533).

However, this home bias effect appears not only for small investors or households. It also seems in the merchandising and acquisition of companies. Ciobanu (2016) presents evidence that geographical proximity plays an essential role in the success of the transaction. This is accompanied by a study from Uysal et al. (2008), who examine geographical proximity of acquisition and their success. Their findings indicate that firms which made a local transaction, within a range of 100 km, have a higher return and a greater success of their deals.

The fact that investors and households buy shares of local firms or invest in local investments leads as a consequence to higher equity prices. Hong et al. (2008) show that in the southern states of the U.S., where relatively few firms per capita are located, the price of stocks is higher and leads to an “only-game-in-town” effect.

Loughran (2008) finds that rural firms are less likely to conduct seasoned equity offerings than firms located in urban areas. In another study, Loughran’s (2007) findings indicate that stocks

of rural companies are traded less because they are less known than urban ones and, as a result, rural stocks are less liquid and have higher trading costs (Loughran & Schultz, 2005). On the opposite, Butler (2008) shows that “local” investment banks sell bonds at lower yields and charge lower fees for over-the-counter deals. Wand et al. (2018) present strong evidence that the location of a firm influences the capital structure, in particular, companies which are centrally located have lower leverage ratios than remotely located firms.

In conclusion, most studies show that location matters for investors and companies. Caused by the home bias, investors instead invest in local companies, whereas “local” can be defined as a country, a state, or a city, depending on the point of view. Companies, on the other hand, have to adapt to the local norms and values to attract investors for debt or equity. This fact shows the importance of the influence of local investors on the capital structure of a company. Though both kinds of capital deal with trust. As Grill et al. (2016) claim, the word credit/loan means “the trust in the ability and willingness, to pay back the debt properly” (p. 353). This trust reaches many hundred years back. However, in the classical corporate finance theories, there are no influences like location and trustworthiness included. Therefore, the present thesis connects these values to the capital structure. The theoretical derivation of these influences will follow in the next chapters.

2.1.5 Conclusion

Table 3 provides an overview of the essential capital structure theories¹⁰ and approaches as well as the influence of home bias on the corporate capital structure.

All of the capital structure theories and approaches still have their standing in academia and are essential when looking from a general perspective. However, all of them are based on the rationality of deciders. Moreover, only external factors such as taxes, information asymmetries, bankruptcy, and so on are considered. In any of these theories, the upper echelons of the firm are part of the “black-box” and there is not influence of the CEO and TMTs, who are part of the firm and provide the capital structure choice. From the reviewed theories, home bias and local investing shows that there appear other impacts on the capital structure, concerning the location of the companies on their equity or debt investors. The literature has shown that investors tend to invest in local companies. This leads to the conclusion that managers of companies could have preferred capital structures depending on their location and their investors. As a result, from this theoretical view on capital structure, the research on home bias and local investing has shown that there appear other influences on the capital structure of firms. This thesis tries to fill the gap of the classic finance theories. On one hand, taking into account the role of decision makers into the capital structure of the firm, i.e., the influence by, for example, the CEO or TMT; influence that has not been covered adequately and on the other hand, the influence of the institutional context through culture and religion that has not been taken into account in a satisfactory way. Therefore, and departing from here, the author will look into the academic strategy field and its main theories concerning the influence of CEOs in the firm and its connection to capital structures of firms, in the next chapter and continue with the institutional connection of culture and religion in the two following parts.

¹⁰ Table 3: Summary of the four main theories; Source: Authors' compilation

Table 3: Summary of the four main theories; Source: Authors' compilation

Theory	Key statements	Year of research	Author
Modigliani & Miller-Theorem	<p>The three Theorems of Modigliani & Miller are:</p> <ol style="list-style-type: none"> 1. The total value of a company is given an investment program and thus a given expected value of the successes on a perfect capital market in balance regardless of the capital structure. 2. The expected value of the return required by the shareholders is a linear function of the company's gearing. 3. The total or average cost of capital used as a discount rate for the benefit assessment is independent of how these objects are financed. 	1958	Modigliani and Miller
Trade-Off-Theory	<p>The core findings of the Trade-Off-Theory are:</p> <ol style="list-style-type: none"> 1. Firms will always choose their debt-equity ratio according to their maximum advantage, including minimum costs and maximal profit. 2. The main aim of the theory is the tax shield, which should be calculated as high as possible, and the costs for financial distresses as small as possible. 	1973	Kraus and Litzenberger
Pecking-Order-Theory	<p>The theory explains that:</p> <ol style="list-style-type: none"> 1. Financing sources will be chosen by way of the least resistance and to an apparent clear order/hierarchy: <ol style="list-style-type: none"> a. Companies prefer internal financing. b. If external funding is necessary, companies choose rather debt capital financing than self-financing. c. Equity is rarely issued and is the least preferred possibility. 	1984	Myers and Majluf
Market-Time-Theory	<p>The market-time-hypothesis holds the view that:</p> <ol style="list-style-type: none"> 1. The current capital structure of firms is strongly related to the historical market value. 2. Firms generally do not care about financing their assets with debt or equity; they instead consider the market timing and choose the best option at present. 	2002	Baker and Wurgler

2.2 Strategy Management

2.2.1 Introduction

Strategic management, as part of business administration, is dealing with the “black box problem” of organizations and the relationship between organizational outcomes and the behavior, actions and decision-making variables (Lawrence, 1997). Between others it tries to answer the critical question in organizational theories: “Why do organizations act as they do?” (Hambrick & Mason, 1984, p. 193)

Nowadays, there are three major theories, which are essential for the present research question, which try to explain, which is the CEO influence on the decision making about the capital structure of firms.

Firstly, the Principal Agency Theory from Jensen and Meckling (1976), which discusses the dilemma between the principal and the agent. Secondly, the Upper Echelons Theory (UET) from Hambrick and Mason (1984), which states that the organization reflects its top managers. Even though the UET does not respond to traditional research in leadership, Hambrick and his colleague Finkelstein are the leading scholars in the area of leadership and strategic management (Reger, 1997). Thirdly, the Institutional Theory, developed by North (1990) which approaches that the values and norms of the institutional context in which a firm operates influences individuals and organizations.

Nevertheless, the key arising question, “Why do organizations act as they do?” (Hambrick & Mason, 1984, p. 193) has not been fully answered. Specially, the present study will try to provide some light to the question of why SMEs act financially -i.e., decide a capital structure as they do? For answering this question, this study will describe the three above theories and the focus will rely on the advances provided by UET, and Institutional Theory.

2.2.2 Principal Agency Theory

“The directors of such [joint-stock] companies, however, being the managers rather of other people’s money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master’s honor, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company.”

Adam Smith, The Wealth of Nations, 1776, p. 700

The Agency Theory was first developed by Jensen¹¹ and Meckling (1976), and the initial work “Theory of the Firm: Managerial Behavior, Agency-Costs, and Ownership Structure” is still today one of the most cited papers in business administration academia.¹² They combine elements of the Theory of Agency, the theory of property rights, and the theory of finance to develop a theory of the ownership structure. They use the name “ownership structure” and not “capital structure” to differentiate the inside (management) and outside (investors who do not have a direct role in the management of the firm) “owners”. Their definition of agency costs explains the separation of control and source of funding. The roots of their assumptions date back to Adam Smith (1776).

2.2.2.1 Conceptions and Propositions

The Principal Agency Theory, similar to the Pecking-Order-Theory, is based, in the core, on an institutional separation between capital owners and capital managers. Timewise it is a theory under the approaches of the neo-institutional capital structure model.¹³

Every economic entity is opportunistic, and there appears asymmetrical information between these individuals, which are divided into two groups: the principal, and the agent. In the conception of the theory, the principal and the agent should follow different (economic) goals, which can imply a conflict.

11 Since 2017, Jensen is on the list for the Noble Prize for his contributions illuminating the dimensions of decisions in corporate finance.

12 Till today this paper was over 115.456 cited (Google Scholar on the 12.01.2023).

13 See chapter 2.1.3 Capital Structure Theories

Underlying the principal-agent relationship is the assumption that both the principal and the agent act entirely rationally and therefore maximize their benefit (Hax, Hartmann-Wendels, & von Hinten, 1988). The parties accept that the contractual partner may be harmed by opportunistic behavior. The resolution of the conflict between principal and agent is made more difficult by the uncertainty about future environmental conditions.

Conflicts of interest between the principal and the agent are always relevant if the principal cannot adequately monitor the agent's actions; this loss of control occurs particularly in financial relationships (Hax, Hartmann-Wendels, & von Hinten, 1988). Depending on the respective contacts, conflicts arise between shareholders and creditors as well as between shareholders and managers, resulting in agency costs of equity or debt (Perridon, Steiner, & Rathgeber, 2017).

Fama and Jensen (1983) assume that the contract structures of organizations separate the ratification and monitoring of decisions from the initiation and implementation of the arrangements. Furthermore, they “are concerned with the survival of organizations in which important decisions agents do not bear a substantial share of the wealth effects of their decisions.” (Fama & Jensen, 1983, p. 301). The question of the extent to which forms of financing can result in different management behaviors, as well as the search for efficient, institutional designs of financing relationships to reduce agency costs are therefore at the center of the agency's theoretical approaches to financing theory. The concentration of agency approaches on possible endogenous influencing factors of the capital structure thus represents a further essential development of the Trade-Off Theory¹⁴.

In the Principal-Agency Theory appear different propositions, which have added up over the years of further research. Overall, they can be grouped into two separate parts. Firstly, the propositions about the conflicts between shareholders and managers, and secondly, the propositions about the conflicts between shareholders and creditors.

¹⁴ The Trade-Off-Theory was further discussed in Chapter: 2.1.3.2 The Trade-Off-Theory

2.2.2.1.1 Conflicts between shareholders and managers

Consumer Thesis: Jensen and Meckling (1976) took the focus of their theory, away from the capital structure with the pure ratio of equity and debt, to the ownership structure and analyzed the underlying contractual obligations and the resulting rights and conflicts between owners, lenders, and management. They identified the phenomenon of consumption in the workplace as a significant conflict between shareholders and managers; this is understood to mean the management's willingness to consume company resources. In their research paper, they assume two cases, the first one with a 100% equity participation in management, and the other one is an outside manager without any shares. In the first case, their prediction states that the management will make all decisions, including the one for the capital structure, to maximize the value of the company. In the other case, the management would take decisions for their consumption and maximize their advantage, such as luxurious business trips, corporate jets, and so on, which will decrease the value of the firm (Jensen & Meckling, 1976).

Free-Cashflow-Hypothesis: Ten years after the first paper from Jensen and Meckling in 1976, Jensen (1986) published a new approach, the free-cash-flow-hypothesis. In his opinion, the management of a company has room for maneuver that can be used to pursue its own goals or desires and is then contrary to the interests of investors. According to Jensen (1986), the higher the free cash flow available to management, the higher the problem. In his model, free cash flow is defined as the financial resources of a company that is still available after realizing old investment opportunities with a positive net present value. If the goal of the shareholder is to maximize the market value of their equity, in this company or elsewhere, this free cash flow should be distributed to the shareholders to be consequently forwarded to more attractive investment projects that are available on the capital market. On the other hand, managers, instead strive for cash flows in the company for increasing their power in the company, even if this does not lead to the expected maximizing return to the shareholders (Jensen, 1986). Pursuing, he develops the theory that explains “1. The benefits of debt in reducing agency costs of free cash flows, 2. How debt can substitute for dividends, 3. Why “diversification” programs are more likely to generate losses than takeover or expansion in the same line of business or liquidation-motivated takeovers, 4. Why the factors generating takeover activity in such diverse activities as broadcasting and tobacco are similar to those in oil, and 5. Why bidders and some targets tend to perform abnormally well prior to takeover.” (Jensen, 1986, pp. 323-324). He states that debt capital has a higher control function because it forces the management to focus on the best and company maximizing projects. This approach prevents “Empire Building”

behaviors, the case where managers only invest in new projects for prestige reasons. Higher indebtedness leads to predictable, regular payment obligations, and thus minimizes the risk of wrong business decisions. However, it should be noted that agency costs of borrowed capital, e.g., exist in the form of bankruptcy costs. Therefore, according to Jensen, the optimal capital structure is defined as the capital structure in which the minimal benefit of debt capital exceeds the marginal cost of debt capital. This leads in addition to the tax deductibility, to an increasingly efficient and therefore company value-maximizing effect (Myers, 2001).

Heaton (2002) expanded this approach and constructs a theoretical model which measures managerial Optimism in corporate finance. His assumptions are: “First, optimistic managers believe that capital markets undervalue their firm’s risky securities, and may decline positive net present value projects that must be financed externally. Second, optimistic managers overvalue their own corporate projects and may wish to invest in negative NPV projects even when they are loyal to shareholders. [...] Managers are “optimistic” when they systematically overestimate the probability of good firm performance and underestimate the probability of bad firm performance. [...] People are more optimistic about outcomes to which they are highly committed” [...] Behavioral approaches are now common in asset pricing, of course, but little work in corporate finance has dropped the assumption that managers are fully rational.” (Heaton, 2002, p. 33)

Over- and Underinvestment Hypothesis: Following Jensen's free-cash-flow-thesis, Stulz (1990) also examines the conflicts between shareholders and managers and explains that the opportunistic behavior of management can lead to both an underinvestment and an overinvestment problem.

Stulz's theoretical model assumes that the management of a company tends to have an aggressive investment policy because it tends to benefit from company growth (empire building). Management's argumentation towards shareholders will, therefore largely be shaped by the statement that the company's generated cash flows are too low to finance all value-creating projects (Stulz, 1990). However, the shareholders mistrust the management because they know about the danger of taking advantage of the management with increasing company size. This agency conflict between shareholders and managers, therefore, leads to inefficiencies concerning over- and under-investment behavior. If a company generates too little cash flow to carry out all value-creating investment projects from its internal financial resources, the shareholders will oppose further financing for the realization of the investment projects (Stulz, 1990). The shareholders are not able to assess the profitability of the investment projects. Due to the distrust of management, the shareholders will assume that it is less about value-creating

investment opportunities and more about the aggressive investment policy that is self-serving by management.

As a result, management will be forced to invest below the optimum, even if value-creating investment projects exist due to the restrictive attitude of the shareholders. Value-creating investment projects are, therefore, not realized, which results in sub-investment problems. Consequently, management uses phases in which sufficient internal financial resources in the form of cash flows are available to make as many investments as possible. In order to compensate for stages with insufficient investment activity, management will, therefore, tend to overinvestment behavior in phases with high liquidity (Stulz, 1990).

The management's over- and under-investment behavior, therefore, leads to lower company value and is particularly significant for companies with volatile cash flows.

According to Stulz overinvestment and underinvestment hypothesis, a company's capital structure is significantly influenced by its cash flows and investment opportunities. Shareholders in companies with low cash flow and small value-added investment opportunities will seek to increase debt levels to limit the influence of management. The opposite is the case for companies with high cash flow and a multitude of value-adding investment opportunities. In essence, shareholders will aim for a low level of debt to benefit from the increase in value through investments in the future (Stulz, 1990). The discretionary leeway of the management can be reduced by using outside capital and thus contribute to a reduction in agency costs. Shareholders strive to optimize the resources available to management to counteract over- and underinvestment behavior. The optimal capital structure, according to Stulz, is therefore defined by weighing the advantages of external financing, i.e., avoiding investments that reduce the value, against the disadvantages of external funding, avoiding investments that create value (Stulz, 1990).

Liquidation Delay Hypothesis: Harris and Raviv formulated in two publications ((1990) & (1991)) another agency conflict between shareholders and managers. As a consequence, the management's leeway can lead to a delay in liquidation, which would have been more advantageous for the shareholders.

It is assumed that management does not seek to liquidate the company advantageously even if the company's assets could otherwise be used much more productively. A rational decision for or against liquidation of the company cannot be expected from the management due to the self-interest of continuing the company. Accordingly, management's behavior towards shareholders in crises will be shaped by the fact that they will try to keep any information that would make it likely that the company will be liquidated away from the shareholders (Harris & Raviv, 1990).

They argue that the use of outside capital can counteract the possible delay of a sensible liquidation of a company. According to their hypothesis, the importance of debt capital is concentrated on an extensive information function (Harris & Raviv, 1990).

A high level of information is connected with the use of outside capital, due to the fact that only through a significant informative value, with open access to balance sheets, profit and loss accounts, and operating profit reports, leads to the trust of investors. Besides, the use of outside capital in crises of the company results in a considerable flow of information, from which the shareholders also benefit. If the company defaults on payment or if loans are at risk of default, management is forced to cooperate with the lenders and disclose all information to avoid bankruptcy. The transparency created by the debt capital, as well as the pressure of the lenders on the management, require a neutral and swift decision about the continuation or reorganization or the liquidation of the company (Harris & Raviv, 1990).

The liquidation thesis of Harris and Raviv (1991) assumes furthermore that companies with a high liquidation value tend to have a higher leverage ratio as well as a higher market value. Still, at the same time, there is a higher risk of default. The higher a company's liquidation value, the more likely it is that liquidation will prove to be the best reorganization strategy.

Ultimately, the optimal capital structure is also determined in this approach by removing the advantages and disadvantages of external financing, whereby the advantages are the improved liquidation decision, and the disadvantages are the associated higher investigation costs (Harris & Raviv, 1991).

2.2.2.1.2 Conflicts between shareholders and creditors

Hypothesis of Wealth Transfer: In the consumer thesis¹⁵ by Jensen and Meckling (1976), not only the agency costs of equity but also the agency costs of debt are analyzed. They conclude that company shareholders have an incentive to carry out risky investment projects and therefore tend to so-called "asset substitution", the transfer of assets at the expense of the lenders, provided that they can increase the risk unobserved by the lenders (Jensen & Meckling, 1976). As a result, creditors are exposed to the risk increase due to a higher risk of default, but at the same time are cut off from the associated more significant opportunities for profit.

The shareholders also run the risk of accepting a reduction or, in the worst case, a loss of their shares in risky investment projects. Still, this risk of default is compensated for the more

¹⁵ Presented in Consumer Thesis

because, if these risky investment projects are successfully implemented, they will have the full added value that exceeds the amount repayable by the lender lies (Jensen & Meckling, 1976). Jensen assumes that under the conditions that the borrowed capital is not earmarked and that management and shareholders pursue the same interests, they will communicate a risk-free investment policy towards lenders, but in practice, they will tend towards a riskier investment policy. The lenders have no insight into the investment projects and their profitability, which means that the shareholders or the management carry out more hazardous investment projects. Thus, a transfer of assets can be realized for their benefit (Jensen & Meckling, 1976).

As a result, shareholders can influence the distribution of future returns in their favor and at the expense of lenders. However, Jensen and Meckling (1976) point out that rational lenders in this situation assess the behavior of the shareholders precisely against this background and compensate for this misconduct by adjusting the conditions accordingly. Ultimately, Jensen and Meckling (1976) stated that the agency costs fall back on the shareholders and are, therefore, independent of the management.

Underinvestment Hypothesis: Myers' article (1977), published in 1977 and therefore nine years earlier, is regarded as one of the classic precursor theories on Agency Theory that analyzes the conflicts between shareholders and creditors. In Myers' opinion, the attempts to explain the low level of debt financing that existed up to then, despite tax advantages, could not fully explain the underutilization of the maximum possible corporate debt ratio. He shows that high levels of debt can lead to a suboptimal investment strategy, which in turn leads to a reduction in the company's value (Myers, 1977).

Shareholders could reject sensible investment opportunities since the profits flow not to them but the lenders. Investment financing through borrowed capital can, therefore, result in a suboptimal investment strategy or a sub-investment problem for the company and cause considerable agency costs. Myers, thus concludes that to avoid agency costs, companies should choose leverage to maximize enterprise value. The targeted gearing should be inversely related to the share of the company's growth opportunities. Therefore, the more significant the proportion of future assets, i.e., the growth options of a company, the lower the gearing ratio should be. Contrary to this, companies with a large proportion of capital-binding and profitable existing assets should choose a high level of debt (Myers, 1977).

Hypothesis of Reputation Effects: Two other agency-theoretical approaches analyze the reputation behavior of the company or their managers and its effect on the conduct of lenders. The underlying assumption of the thesis, first developed by Diamonds (1989), is that companies are increasingly risk-averse when choosing their investment projects in order to achieve a

reputation as a good borrower in the creditor market. For example, a young company without a credit history will prefer a risk-averse investment since a risky investment with a significantly higher return carries the risk that lenders could be discouraged because of an external assessment of the risk and the selection of investments by the lenders is not possible. On the other hand, lenders in young companies with no credit history and lack of experience in creditworthiness will use an average interest rate that considers a somewhat risky investment project. As a result, the future access of young companies to the debt capital market and the underlying conditions will be determined by the company's subsequent debtor behavior. In this way, a company will always try to avoid the credit default or delays in interest or principal payments due to the assessment of the creditworthiness by the lenders. Following this hypothesis, if the company has a correspondingly good reputation with lenders over a long period, it will also not want to jeopardize it through risky speculative investments (Diamond, 1989).

The approach of Hirshleifer and Thakor (1992) also addresses the reputation effects. However, in contrast to Diamond, the focus is not on the company and its reputation per se, but rather on the repayment of the CEO and management. The resulting minor use of debt capital, in turn, leads to suboptimal investment decisions. Thus, the choice of capital structure, with little debt capital, harms the company's value.

2.2.2.2 Acknowledgement and Critic

The Principal Agency Theory approaches have made a significant contribution to the further development of the theory of the optimal capital structure since they analyze financing and forms for funding not only concerning the transformation of given risks but also about the underlying behavioral incentives for management and shareholders (Hermanns, 2006).

In contrast to the classical financial theory approaches¹⁶, agency approaches postulate the relevance of funding, since the divergent interests of the parties can have direct consequences for the company's value. Due to the different research approaches, this also leads to such various and controversial results, which affects, among other things, the capital structure.

The majority of agency theoretical approaches to the capital structure are based on the fact that shareholders can benefit from limited liability and influence management. At the same time, shareholders bear the risk of default but do not benefit from the above-average return on

¹⁶ See Chapter: 2.1.3 Capital Structure Theories

particularly risky and successful business can, since the agreed interest payment is fixed and limited from the start. Since these conflicts of interest exist, and a corresponding surcharge compensates lenders, this conflict automatically leads to a reduction in the value of the company.

There are different and sometimes controversial assumptions regarding the nature and impact of agency conflicts. Firstly, this can lead to agency conflicts between shareholders and managers. Secondly, it can also arise between shareholders and lenders and thirdly, managers, and lenders. The scientific spectrum has dealt with the most varied forms but does not come to a generally valid statement and explanation.

In summary, it can be said that the agency-theoretical approaches have made valuable contributions to the explanation of isolated phenomena of the individual agent. The approach of the theory and their different methods focus just in one of the characteristics of decision-making, opportunism, and the impact of incentives trying to describe an optimal strategy for an ideal capital structure. Even more, the premise of the theory is a clear and obvious separation between principals and agents. So, most of these studies dealt with MNE or large corporations of limited liability where there is a huge separation between these two actors, principals and agents. In SME, the separation between owners and managers is lower and the chance for monitoring is greater. In that sense the role of agency theory in explaining the capital structure of the SMEs seems limited.

2.2.3 Upper Echelons Theory

The UET was published by Donald Hambrick and Phyllis Mason as an article in 1984 in the *Academy of Management Review* with the title “Upper Echelons: The Organization as a Reflection of Its Top Managers”.¹⁷ With this pioneering work, Hambrick and Mason, develop a theory which states that “organizational outcomes – strategic choices and performance levels – are partially predicted by managerial background characteristics” (Hambrick & Mason, 1984, p. 193).

¹⁷ Till today this paper was over 18.261 cited (Google Scholar on the 12.01.2023).

2.2.3.1 Conceptions

The “Upper Echelons: The Organization as a Reflection of Its Top Managers” is considered the foundation of the Upper Echelons Perspective (Bresser (2010), Carpenter et al. (2004), Nielsen (2010), and Dauth (2012)). However, the authors' considerations are again based on the behavioral science decision theory, which was first coined by Barnard (1938), Cyert and March (1963), March and Simon (1958), and Simon (1997, first in 1945). Building on this theory, various works appeared from 1982 that dealt with the behavior of executives. They analyzed the extent to which different personal characteristics can be traced back to the behavior of executives, for example, and among others, by Donaldson and Lorsch (1983), Meindl et al. (1985), Miller et al. (1982), Song (1982), and Wagner et al. (1984).

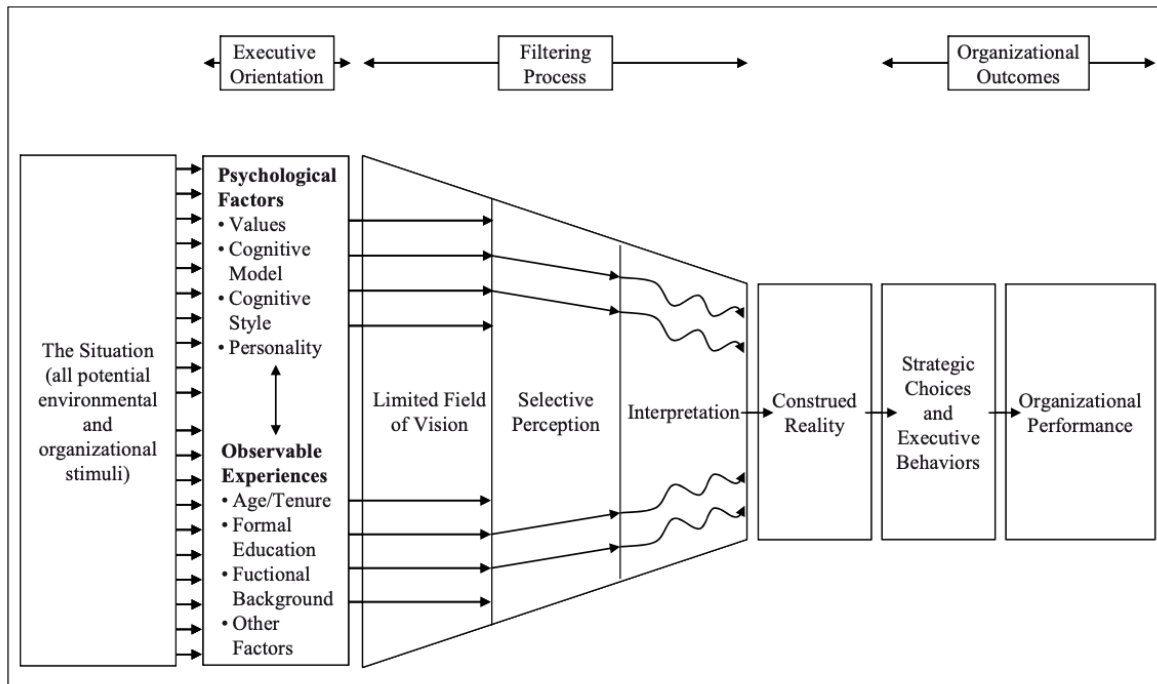
In 1984, Hambrick and Mason attempted to capture the existing knowledge about the relationships between top managers and the strategy or success of a company in formalized relationships (Hambrick & Mason (1984), Hambrick (2005), and Hambrick (2007), Finkelstein et al. (2009)).

In the frame of reference developed by Hambrick and Mason, the behavior or how leading individuals process information is the focus of the analysis (Hambrick and Mason (1984), Hambrick (2005), and Hambrick (2007)). Following the authors' reasoning, the situations with which managers are confronted usually have a high degree of complexity (Hambrick & Mason, 1984). Using the concept of bounded rationality by Cyert and March (1963), Hambrick (2007) states later in his “update”, that “the central idea in our original paper, and the core of the Upper Echelons Theory, has two interconnected parts: (1) executives act on the basis of their personalized interpretations of the strategic situations they face, and (2) these personalized construal's are a function of the executives' experiences, values, and personalities.” (Hambrick, 2007, p. 334).

Furthermore, he argues that top managers cannot perceive and assess all relevant information and processes inside and outside the company (Hambrick & Mason (1984) and Hambrick (2005)). Every manager, therefore, uses individual experiences, values, and norms as part of a "filtering process" to reduce the complexity of a decision situation. The psychological characteristics of a person are, therefore, decisive for how a top manager perceives a situation, selects and interprets information (Bresser (2010); Hambrick and Mason (1984)). After the "Filtering Process" has ended, the top manager has an insight into the part of (objective) reality shaped by his (subjective) attitudes, values, and norms (Hambrick, 2005). This individual section of fact then serves as the starting point for the actions of the manager and for making

strategic choices, which can ultimately have an impact on the company's overall success. Figure 5: Strategic Choice Under Conditions of Bounded Rationality, illustrates the argument of Hambrick and Mason.

Figure 5: Strategic Choice Under Conditions of Bounded Rationality; Source: Hambrick & Mason (1984)

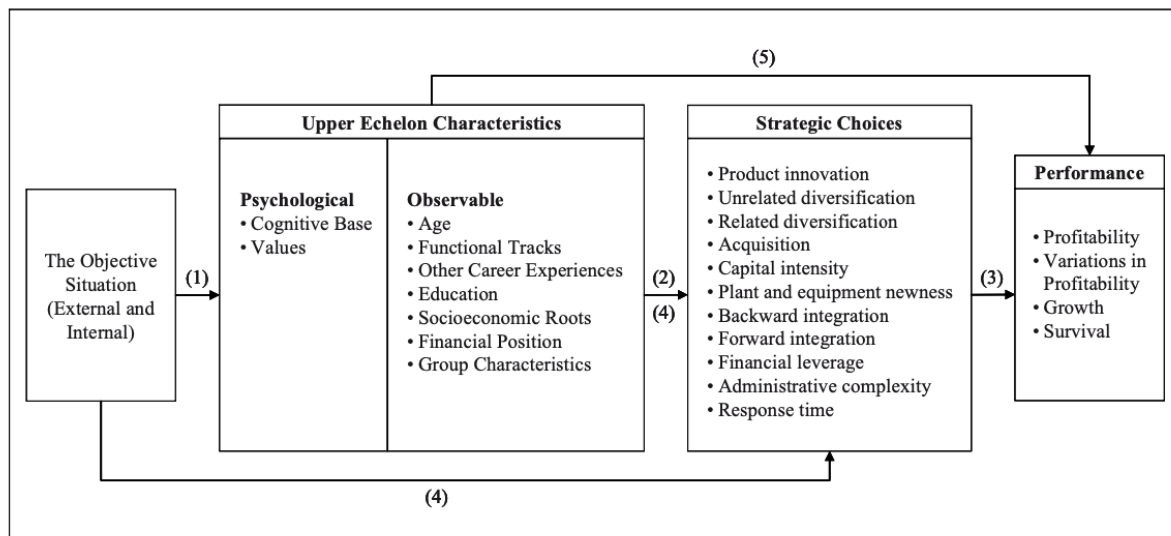


The founders of the upper echelons approach, therefore, not only provide a conceptual framework that can be used to illuminate company executives, but they also develop a method for operationalizing theoretical constructs. The statements of Hambrick and Mason can be summarized in the following fundamental theses (Finkelstein and Hambrick (1996), Hambrick and Mason (1984), Hambrick (2005), and Hambrick (2007)):

1. Top managers can influence the success of a company through their behavior and their decisions.
2. The behavior and decisions of top managers are determined by their psychological characteristics.
3. The psychological characteristics of top managers can be approximated using demographic variables.

This hypothesis ultimately flow into the model shown in Figure 6: An Upper Echelons Perspective of Organizations, which shows the central constructs and presumed causal relationships of the upper echelons approach illustrated.

Figure 6: An Upper Echelons Perspective of Organizations; Source: Hambrick & Mason (1984)



Hambrick and Mason initially postulate that there are different links within their model, displayed in Figure 6 and numbered as follows:

1. There is a link between the external environmental conditions and the internal situation of the company on the one hand and the characteristics of the top managers on the other hand. So, the situation in which a company finds itself, therefore, has an impact on which people are appointed to the top management team: "upper echelons characteristics are in part a reflection of the situation that the organization faces" (Hambrick & Mason, 1984).
2. In the second causal connection, the characteristics of the top managers are seen as determinants of strategic decisions that are made in a company.
3. These strategic decisions, in turn, affect the company's success.
4. They also suspect that decisions in the company are not only influenced by the characteristics of the top managers but are also dependent on the situation in which a company finds itself.
5. Ultimately, it is assumed that there is a direct connection between the characteristics of managers and the success of the company.

The frame of reference developed by Hambrick and Mason has forced many researchers to deal intensively with the management bodies of a company (Bresser (2010), Carpenter et al. (2004)). The first contributions, which can be attributed to upper echelons research, primarily analyze the direct influence of demographic variables (e.g., age, educational background or professional experience of top managers, on various dependent variables such as the financial success of the

company; see for example, and among others, Miller (1991), Norburn and Birey (1988), Thomas et al. (1991), Wiesema and Bantel (1992).

Other studies are devoted to the connection between the characteristics of top management and other phenomena such as the formation of strategic alliances (Eisenhardt & Schoonhoven, 1996), the dynamics of competitive actions (Ferrier, 2001) or internationalization strategies (Nielsen, 2010). Also, moderating effects have been considered in recent years. The contributions by Crossland and Hambrick (2007) and Crossland and Hambrick (2011) study, for example, to what extent "managerial discretion", i.e., the degree of freedom of decision for managers, influences the relationship between the top management characteristics and the success of the company (Dauth, 2012).

2.2.3.2 Propositions

The observable characteristics are discussed in more detail in the following section. Hambrick and Mason (1984) categorize them as age, functional tracks, career experience, formal education, socioeconomic background, financial position, group heterogeneity, and develop within these 21 individual propositions.

Age: The general perception of "age" is that young managers will be riskier, and on the contrary, the position is the statement that older managers do not like to take high risks and prefer to stay in a shallow environment until their retirement.

Functional Track: The general perception of the "functional track" assumes in general that the past experience of top managers in similar or other positions and organizations affects the strategic outcomes and the growth and profitability of the firm.

Other Career Experiences: The assumption of "other career experiences" is generally that inside service by top managers will be negatively related to strategic choices, involving new terrain, however in a stable environment, positively associated with profitability and growth, compared to environmental discontinuity, where this will be negatively associated with profitability and growth.

Formal Education: In the development of their proposition, Hambrick and Mason state that "formal education" of the manager or members of the TMT makes a difference in general financial performance and innovation. The perception is that different educational professions, such as engineering, history, law, English literature, and students, for example, from Harvard Business School or the University of Valencia, Faculty of Economics, have different cognitive biases and therefore differ in performance and innovation.

Socioeconomic Background: The assumption of the “socioeconomic background” is that the origin and the social milieu of the CEO matters for the performance. As Finkelstein and Hambrick state: In 1975, managers of major U.S. firms were almost exclusively white males, predominantly Protestant, and Republican (Finkelstein & Hambrick, 1996). Most of them came from middle-class families and attended mostly the same group of prestigious universities.

Financial Position: The assumption of the “financial position” is that the manager’s total income matters for their performance and, therefore, for the company’s financial performance. This proposition links to the Principal Agency Theory, which deals with this issue as well (Jensen & Meckling, 1976).¹⁸

Group Heterogeneity: The assumption of the “group heterogeneity” is a wide scholar field that attracted many researchers even without connecting to the UET. However, the critical idea is similar and builds mainly on top of Janis (1972) and Filley et al. (1976) findings. Within homogeneous groups, there is agreement about most decisions because the cognitive “roots” are similar. As Hambrick and Mason point out, this leads to an excellent performance in stable and upgoing environments, but not in rough ones, where managers are obliged to think outside of the box. This outside of the box thinking is, on the other hand, improved in heterogeneous TMT.

2.2.3.3 Acknowledgement and Critic

Even though the model, developed in 1984, was largely adopted in the literature, there was no homogeneous view of the general explaining power of the UET. Numerous scholars have reviewed and summarized the existing body of research that allow us to describe two different conclusions.

First, the widespread acceptance of the theory. For example, and among others, Finkelstein and Hambrick (1996), who summarize on nearly 400 pages and almost 40 pages of references the strategic management field in the effects on CEOs, TMTs, and board of directors to find the significance of the UET or Carpenter et al. (2004), who reviews 31 UET papers and reflects the state-of-the-art scholar landscape eight years later, and Hambrick (2007), who finds a homogeneous scholar landscape about the UET.

Second, a nonhomogeneous academic landscape around the UET and the conclusion that the upper echelons’ findings alone are insufficient. Nielsen (2010), for example, and among others,

¹⁸ 2.2.2 Principal Agency Theory

find inconclusive results. She also states that 20 % of the researchers did not use the UET alone and added other theories. Jensen and Zajac (2004) combine the UET and the Agency Theory (Jensen & Meckling, 1976), Bergh (2001) uses the UET and adds the Resource-Based View (RBV), Levy (2005) connects the managerial cognition and the UET, Pazelt et al. (2008) uses the UET with an additional “organization’s business model”, and Nielsen and Nielsen (2013), for example, connect the Institutional-Economics Theory from North (1990) with the UET, to show the secure connection between the individual, organizational and institutional level. Hambrick himself changed his model in different studies and added specific other approaches in contrast to the UET (Hambrick, Geletkanycz, & Fredrickson, 1993).

Overall, the UET is one of the major strategic management theories and has been used with many researchers’ positive results. Even though there are different critics on the theory itself, the CEO’s (significant) influence of the firm is indisputable. With the addition that, sometimes, other theories have been added, the theory has a good power of explanation. Nevertheless, the influence of the CEO on the capital structure of a company has not been successfully discovered. Consequently, there has not been a universal concept of the capital structure being influenced by the CEO from a UET approach.

2.2.4 Institutional Theory

The Institutional Theory argues that behavior of organizations and individuals is prescribed by institutions (DiMaggio & Powell, 1983). Originally, Institutional Theory was promoted as a reaction to the academic discourses based on individual and rational choice models (March & Olsen, 1989). Meanwhile, Institutional Theory has become one of the most popular theoretical orientations in the field of organizational science (Dacin et al. (2002), Mizruchi and Fein (1999), Suddaby (2010), and Walgenbach and Meyer (2008)). At the latest, the Institutional Theory reached economic sciences with North¹⁹ (1990), who adapted the key ideas of the Institutional Theory with economic growth and development.

The key premises of the Institutional Theory, is that everyday interactions in organizations, and between individuals are influenced by institutional norms and values. These institutional norms and values influence, for instance, organizational rules, norms, structures, and beliefs for interactions and behaviors (Lammers and Barbour (2006); Lammers and Garcia (2014)).

¹⁹ North won in 1993 a Noble Prize.

2.2.4.1 Conceptions and Propositions

The roots of the Institutional Theory reach back to Max Weber (1905), who laid the foundation, by using the term “Institution”. Weber defined that widespread beliefs and values manifest themselves in institutional arrangements, which shaped the surrounding of a certain group nowadays as well as for the future and further generations. Furthermore, these values, norms and beliefs become routine and taken for granted (Meluch, 2016). However, in his view this was more a general understanding and approach, about an explanation of the modern world and its authority, rationality, and bureaucracy, without an underlying Institutional Theory.

In the 1970s and 1980s sociologically-leaning scholars, mainly developed the Institutional Theory, with some key concepts, like institutions, institutionalization, isomorphism, and rational myths (Meyer and Rowan (1977), Zucker (1977), and DiMaggio and Powell (1983)). For them, the Institutional Theory means to consider how institutions are created and sustained through “widespread social understanding” (Greenwood, Oliver, Sahlin, & Suddaby, 2008, p. 8).

Meyer and Rowan (1977) rejected the idea that only functional efficiency shapes the formal structure of organizations. They argue that organizational structures are built upon on rationalized myths, rather than upon functional efficiency. These rationalized myths can be practices and routines that are imposed by society and reproduced in order to gain social legitimacy and assure survival (Meyer & Rowan, 1977).

Zucker (1977), whereas, investigated the influence of culture on social knowledge and as part of the objective reality from the perspective of Institutional Theory. In her view, the persistence of institutions, depend on the degree of institutionalization, which leads to the arguing that more institutionalized institutions are more persistent than those that are less institutionalized. In addition, when practices, beliefs and rules have become highly institutionalized, there is no need for control through sanctions or incentives because these practices are taken-for-granted (Zucker, 1977). This control would rather lead to a deinstitutionalization, since these considerations would present alternative behaviors, which would later on lead to deviate from institutionally prescribed behavior (Zucker, 1977).

Apart from Meyer and Rowan (1977) and Zucker (1977), DiMaggio and Powell (1983) raised the question why organizations are so alike in a given institutional context. For them there seem to be a general influence of institutions on different organizations. They investigated the diffusion of institutions and the resulting homogeneity among organizations, introducing two important concepts, namely the organizational field and institutional isomorphism. They define

an organizational field as “recognized area of social life” (DiMaggio & Powell, 1983, p. 148) in which organizations share the same institutional context. In their explanation, the organizational field is normally comprised of the most important stakeholders with whom local organizations are interacting. In this context, the influence of suppliers, customers, and regulators on organizations seem to be essential. For the second concept and the explanation for institutional isomorphism, DiMaggio and Powell (1983) identify three different forms of institutional pressures that lead to homogeneity among members of an organizational field, namely coercive, mimetic, and normative pressures (DiMaggio & Powell, 1983). This coercive pressure could come from strong players in the field on which the local organization depends, followed by mimetic pressures for the imitation of other organizations that are considered to be more legitimate. DiMaggio and Powell (1983) described this mimetic pressure mainly in uncertain situations. Normative pressures are associated with professionalism or education, causing a standardization of behavioral patterns. In turn, non-conformity with institutional prescriptions leads to a loss of legitimacy and sanctions that can threaten organizational survival.

One of the leading economists in the Institutional Theory field is North (1992). For him, institutions are the framework that people have invented to control the interaction of people on the political, societal and economic level. Institutions are above all rules of the game for organizations (public corporations, parties, associations, companies, trade unions, cooperatives). For North (1992), organizations are the players and institutions are the rules of the game. However, he must now theoretically justify why institutions arise at all. His explanation is that institutions are formed because markets are imperfect, i.e., information costs something. The transaction costs are therefore not zero. Institutions provide rules of procedure to facilitate human relationships, according to North (1992). They reduced uncertainty and reduced transaction costs. Institutions thus created a framework for the exchange. The emergence of institutions is also based on property rights and rights of disposal, which have to be enforced. North (1992) distinguishes the institutions into informal (conventions, customs, unwritten rules) and formal restrictions (constitution, courts, justice system, etc.).

2.2.4.2 Acknowledgement and Critic

Based on the long history of its origins, dating back till Max Weber (1905), the meaning and the use of the Institutional Theory is nowadays as popular, as, for example, the principal Agency Theory and the UET. Meanwhile, Institutional Theory has become one of the most popular

theoretical orientations in the field of organizational science (Kaiser, 2014). The Institutional Theory of organizations puts institutions at the core of the analysis of organizations' design and conduct (Berthod, 2016). Following this point of view, organizations are in the beginning local institutions and become institutions of wider institutions. This positive "all explanatory" approach is on the other hand the biggest critic. Suddaby (2010) criticizes that the theory has been stretched far beyond its core purpose, while Willmott (2015) criticizes that the Institutional Theory does not cover multiple changes and crises which appear nowadays, such as climate change, feminism, and global financial instability. According to him the theory should adapt to into a more critical form of analysis. Mohamed (2017) argues in a similar way and states that "static institutional explanations" belong to the past and Munir (2019), criticizes the Institutional Theory for the lack of emancipatory agendas, and its privilege agentic power over hegemonic.

Lok (2019) presents different view and argues that it is possible for working with the Institutional Theory in a critical way. He states that in practice the Institutional Theory should not be the only selectively coopting social theory. Rather, in connection with "other" social theories, like Nielsen and Nielsen (2013), for example and among others, who connect the Institutional Theory with the UET, to show the secure connection between the individual, organizational and institutional level.

2.2.5 Conclusion

The last section presented an overview of three essential strategy management theories and their approaches and the influences on an individual, organizational, and institutional impact on companies and their (capital) structure. All three theories try to identify the "black box" firm and their organizational outcomes. As Jensen and Meckling (1976) state: "The firm is a "black box" operated so as to meet the relevant marginal conditions with respect to inputs and outputs, thereby maximizing profits, or more accurately, present value." (p. 306 ff.) and Hambrick and Mason (1984) communicate "organizational outcomes – both strategies and effectiveness – are viewed as reflections of the values and cognitive bases of powerful actors in the organization." (p. 193). Generally, it can be stated that top managers influence the success of a company through their behavior and their decisions (Finkelstein and Hambrick (1996), Hambrick and Mason (1984), Hambrick (2005), and Hambrick (2007)).

The Principal Agency Theory by Jensen and Meckling (1976) is still today one of the essential theories in business administration academia and represents the contrary positions of principals

and agents. The UET is a theory which states that “organizational outcomes – strategic choices and performance levels – are partially predicted by managerial background characteristics” (Hambrick & Mason, 1984, p. 193). The Institutional Theory reaches back to Weber (1905) and the idea that the surrounding institution influences individuals an organization. Later, the theory was mainly developed by Meyer and Rowan (1977), Zucker (1977), DiMaggio and Powell (1983), and North (1990). The key premise of the Institutional Theory is that institutional norms and values influence everyday interactions in organizations and between individuals. These institutional norms and values influence, for instance, organizational rules, norms, structures, and beliefs for interactions and behaviors (Lammers and Barbour (2006) & Lammers and Garcia (2014)).

Even though all theories have their unique features, many researchers use them in a joint way, such as Jensen and Zajac (2004), who combined the UET with the Principal Agency Theory perspectives, or Nielsen and Nielsen (2013), who use a combination between the UET and the Institutional Theory. Overall, all of these individual theories and approaches have their standing in academia and are essential when looking from a general perspective as well as specific individual research fields in strategy management.

However, and reaching back to the last section (2.1) of the capital structure theories, this section has presented that organizations, in this case, SMEs, are managed by individuals with various individual influences. Therefore, these individuals, in the case of this study, the CEOs or TMT’s, defines the capital structure of the firm. A significant shortcoming of these three management theories is that they did not include the influence of culture and religion on the individual, organizational, or/and institutional levels. Therefore, and departing from the next section will define culture and its major frameworks to constitute this influence firstly, on the different levels (individual, organizational, and institutional), and secondly on the firm’s capital structure.

2.3 Models of Culture

2.3.1 Introduction

“When I was a doctoral student at MIT between 1988 and 1992, the word “Culture” was never spoken in any of the classes I took. In fact, it was a word that mainstream economists were very eager to avoid because it was considered a sloppy way to deal with economic problems, or more accurately, to avoid dealing with them. Any cultural explanation was seen as a cheap way to explain what we were unable to explain on the basis of sound economic principles. It was a cop-out answer used by people unwilling to work hard enough to dig out the real economic answer”.

(Zingales, 2015, p. 1).

However, nowadays, this seems to have changed. During the last decade, there is an enormous number of international studies trying to connect culture with all different economic fields. This interdisciplinary connection between economics and other disciplines such as anthropology, history, law, psychology, and sociology display the importance (Aggarwal & Goodell, 2014). Culture is not a stable concept or theory that is clear and visible. Kühnen (2015) argues that “Defining culture is as hard as nailing pudding against the wall – it’s not possible” (Kühnen, 2015, p. 7). According to Steinmetz (1999), there are more than 190 definitions of culture. Zingales (2015), for example, displays one description as: “A definition of Culture commonly used in economics is “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (Guiso, Sapienza, & Zingales, 2006, p. 23) in (Zingales, 2015). Nowadays, there has been a differentiation between the historical definition of culture and the modern definition of culture (Reimer, 2005).

The historical one has two major theories. The first one is from Kluckhohn and Strodtbeck (1961) and the second one is from Hall and Hall (1990). The modern definition of culture includes six major definitions. These theories include the descriptions of culture from Fons Trompenaars (2005), Shalom Schwartz (1999), Erin Meyer (2014), GLOBE Study (Dastmalchian, 2018), World Values Survey (Haerpfer, 2018), and Gert Hofstede (2001).

The following section will provide a general historical overview of the development of the “concept Culture”, detached from economics and finance, and its adjustment during the last 120 years. Afterward the definition of new major culture theories will be individually displayed, followed by an evaluating conclusion.

2.3.2 Historical Definition of Culture and their Theories

“Vérité en-deca des Pyrénées, erreur au-delà”

„There are truths on this side of the Pyrenees that are falsehoods on the other”

Blaise Pascal (1623-1662) from Pensées

What is culture? Culture is understood very comprehensively and inconsistently, both in science and in everyday life. Steinmetz (1999) states that there are more than 190 definitions of culture. Culture is often equated with art, literature, theater, codes of conduct in civilization, and everyday life, like traveling to other countries to discover foreign cultures, which also became one of the latest trends in today's society. Weber (2011) describes culture as “A particular society at a particular time and place.”, which is similar to the description of Zingales (2015), who states that “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (Guiso, Sapienza, & Zingales, 2006, p. 23) in (Zingales, 2015). Until today, there is no all-encompassing and uniform definition, since culture has been determined differently in the past and continues to be defined depending on scientific orientation, intent, and discipline (Boensch, 2013).

Moreover, another difficulty for defining culture that all kinds of different research areas have their interest in determining culture for their purposes. Barmeyer (2000) offers a short inventory of cross-cultural research/interculturality within various disciplines. This inventory includes psychology, sociology, anthropology, linguistics, pedagogy, business administration, and cultural studies. In addition to the problem of the discussion about the cultural concept in anthropology and psychology, Krewer (1996) and Wassmann (1996) offers a detailed analysis in the field of ethnology and comparative psychology. Allport (1959), (1970), and (1974)) differentiates between real culture and the cultural construct. The psychologist looks at authentic culture, and he adds historians, cultural anthropologists, and sociologists to the cultural structure. Schmidt-Lux, et al. (2016) offer a summarizing connection between culture and sociology.

The root of the first cultural definitions reaches back to Weber (1905) within the sociologic research field. In his classic, “Die protestantische Ethik und der Geist des Kapitalismus”, Weber did not name anything culture, however, he describes collective action in a way, researchers nowadays describe cultural dimensions. Jaeger (1992) interpret that Weber's sees culture as the basic factor and driving force of social development insofar as it has non-substitutable functions of motivation for action, action orientation and standardization of action, and by consciously

taking a position of the world and its willingness and willingness to act and to give meaning in all four areas. Nunn (2012) presents similar evidence and states that the values and beliefs of early European settlers form the foundation and the “culture” of their institutions, including long-term economic development. Kühnen (2015) states that cultures change over time in a certain way to increase prosperity -individual and general wealth- and explains this with the general theory of Abraham Maslow and his pyramid of needs. Until the 1950’s the cultural field was mainly a research area for anthropologists. von Fürer-Haimendorf (1955) provides an overview of the history of culture and the cultural development until the first major accepted theories.

For Loenhoff (1992) and Warthun (1997) too, culture is a dynamic, functional, and adaptable system with an ongoing process that man actively shapes and becomes human in the first place. This dynamic is controversially discussed against the background of globalization (Boensch, 2013). Cultures are no longer closed structures that are congruent with the territorial and linguistic expansion of a people. Today they are characterized by mixtures and penetrations. Bicultural marriages, mobility of work, state-of-the-art communication technology etc. have made it possible for people to find their way in a complex world and redefine themselves (Boensch, 2013).

There are many different approaches to systematize different collective cultural concepts. These try to do justice to the complexity of the idea of culture. In this context, they tend to focus on the various mental programming of people regarding spatial, temporal, human, and nature-oriented orientation (Rothlauf, 2006).

Bolton (2001) notes that dividing culture into a macro and microanalytical description of culture is problematic. In his essay, "Can you describe or explain cultures without using stereotypes?"²⁰ he particularly criticizes Hofstede and Hall for their over-generalization and the view of culture as "container culture", which only makes descriptiveness possible, but cannot be used to explain explanations. In his view, cultural specifics could be registered but not necessarily understood.

²⁰ „Kann man Kulturen beschreiben oder erklären, ohne Stereotypen zu verwenden?“

2.3.2.1 Clyde Kluckhohn & Fred Strodbeck

The more significant research started with Clyde Kluckhohn, a cultural anthropologist. Kluckhohn (1951) described that culture is the broad context of human behavior and attributed the following properties: „1. Culture is learned, 2. Culture derives from the biological, environmental, psychological and historical components of human existence, 3. Culture is structured, 4. Culture is divided into aspects, 5. Culture is dynamic, 6. Culture is variable, 7. Culture exhibits regularities that permit its analysis by the methods of science, 8. Culture is the instrument whereby the individual adjusts to his total setting, and gains the means for creative expression.” (Kluckhohn, 1951, p. 87).

From these characteristics, Kluckhohn developed the following definition about culture: “A Culture is a historically created system of explicit and implicit designs of living, which tends to be shared by all or specially designated members of a group at a specified point in time” (Kluckhohn, 1951, p. 98). The system is conceived as a kind of organization (actually "institution" used here in the previous work) with a specific content in which the different explicit and implicit life patterns are found. The culture members are so aware of these exact patterns that they could describe them to a stranger and are themselves a role model and design for them that could be observed by strangers. This includes, for example, culture-typical processes of wedding ceremonies. Implicit patterns are unconscious to the members and are, therefore, referred to as "background phenomena" (Kluckhohn, 1951, p. 98). They are so pervasive that they seem almost irrelevant to everyday life for the person living in the culture but are entirely natural. In a later work -after Kroeber and Kluckhohn (1952) had defined in a literature review more than 164 different existing definitions of cultures- Kluckhohn and Strodbeck (1961) described a cultural concept, which consists of underlying cultural assumptions and formed cultural paradigm. These paradigms include the following five aspects: human and nature, time human nature, activity, relationships (Kluckhohn & Strodbeck, 1961). In his underlying assumptions about culture, the economist Keller (1982) refers to Kluckhohn (1951), expanding the cultural properties and clarifying culture's dynamics and versatility.

However, the most noted classic culture theory is from Kluckhohn and Strodbeck (1961), who defined a cultural concept, which consists of underlying cultural assumptions and formed the cultural paradigm. This study can be seen as one of the first studies to analyze and present cultural differences using dimensions. In the theory of Kluckhohn and Strodbeck, basic assumptions about human existence as an object to be analyzed are at the center of the

consideration instead of values (Reimer, 2005). On this basis, the researchers formulated five dimensions of underlying assumptions, which are presented below:

Human Nature Orientation: Within this dimension, Kluckhohn and Strodtbeck identify the possibility of a static and a dynamic perspective. From a static point of view, a distinction can be made between cultures in which people are understood to be right in principle (trust societies) or wrong in principle (distrust societies) or partially excellent and evil. Concerning the dynamic view, cultures are slightly differentiated about their assumption about the human being's changeability over time.

Man - Nature Orientation: Kluckhohn and Strodtbeck distinguish cultures according to the three underlying assumptions: human adaptation to nature, harmonious relationship with nature, and human dominance over nature.

Relational Orientation: A distinction is made between individualistic and collectivist cultures. The researchers identify a further breakdown of the collectivist pole, according to hierarchical (linearity) and equal (collateral) characteristics. Hierarchical groups are characterized by stability and continuity, but similar groups are characterized by changeability over time.

Time Orientation: Kluckhohn and Strodtbeck differentiate between past, present, and future-oriented cultures.

Activity Orientation: In the last dimension, the authors see cultural differences in which of the three forms, being, becoming, and doing, are of great importance to society.

2.3.2.2 Edward Hall & Mildred Hall

The second "classic" representative of culture research is from Hall (1987) and Hall and Hall (1990), who also have been working intensively on cultural studies for a long time. As part of his research and theory, they identified numerous cultural characteristics, with the dimension of context orientation being particularly well accepted and used. The dimensions of spatial orientation, time orientation, and speed of information processing emerge as the most important and most recognized cultural characteristics. In detail, they identified four characteristics:

High / Low Context: Low-context cultures are characterized by loose and changing networks of relationships. Since the contacts are too short-lived to develop their context, interpersonal communication is unambiguous and direct, i.e., the amount of information formulated immediately is very high to pass on the meaning of the message correctly. In high-context cultures, however, people's relationships are long-term and profound. Therefore, it is possible

that a lot of information can already be formulated from this relationship without being explicitly stated.

Space: Hall differentiates between cultures with different understandings of privacy and territory. Privacy is understood to mean the space surrounding a person, into which a third party is not allowed to enter without permission. Whereas, on the other hand, the territory of a person includes those things which he regards as his personal property.

Monochronic / Polychronic Time: While in the monochronic time view, everything can be processed and processed one after the other, time is seen as circular in a polychronic context so that things can be done simultaneously.

Fast / Slow Message: This fourth dimension distinguishes cultures in terms of their encryption or decryption speed from information conveyed. Hall differentiates between cultures with high and cultures with low information speed. For example, prose / poetry, headlines / books, TV commercials / TV documentaries, television / print media can be mentioned as media for the correspondingly fast / slow news transmission.

2.3.3 Modern Definition of Culture and their Theories

At the present moment, there are principal six different and mainly used cultural models, which will be individually discussed in the following section.

2.3.3.1 Fons Trompenaars

Fons Trompenaars (2005), based his cultural concept on a written survey from managers (75%) and administrative staff (25%) from various companies in 50 countries, with a total of 30,000 responses during the period from the late 80s to the early 90s (Reimer, 2005). In his study, he identified seven dimensions, whereby the researcher regards the poles of the dimensions as existing and interdependent in parallel. The Trompenaars dimensions are:

Universalism / Particularism: Universalist cultures are to be understood as rule-oriented societies. General norms accepted in the culture are considered guidelines for behavior and decisions and are placed above friendly relationships. Exceptions will not be approved as they could overturn the entire rule system. The behavior of particularisms, however, is based on the current situation. Interpersonal relationships are given priority over legal regulations.

Individualism / Communitarism: Individualists can be characterized by “self-centeredness” and the associated pursuit of self-interest. By contrast, societies of communitarian cultures primarily aim at group goals and are guided by guidelines accepted within the group.

Neutral / Affective: In affective cultures, feelings are publicly expressed through numerous forms (laughter, gestures, etc.). In contrast, neutral societies aim to control and suppress feelings in public. However, according to Trompenaars, this characteristic should not be confused with emotional coldness.

Diffuse / Specific: Within the dimension, the degree of integration of different life areas and personality of the people of a particular culture is described. Diffusivity is characterized by mutually influencing areas of life and personality. In specific societies, on the other hand, the fields of life are viewed and lived separately.

Status achievement / Status ascription: The main focus here is on the way to achieve status in the respective society. On the one hand, Trompenaars names cultures in which the members are assigned an individual condition based on their “being”. The status can be based on age, gender, educational level, or title. This contrasts with the performance-oriented cultures. The status of a person is based on the success that they have achieved in their efforts.

Human-Time-Relationship: The importance of past, present, and future within a culture is the focus of interest. A distinction is made between a sequential and synchronous understanding of time. The former represents a sequential sequence of events and, a clear boundary between past, present, and future. In contrast, in synchronous cultures, many activities can take place at the same time. The three-time horizons are therefore considered to be closely linked.

Human-Nature-Relationship: According to Trompenaars, cultures can be differentiated according to the role they assign to nature. On the one hand, he knows about cultures that strive to control nature as far as possible. This contrasts with cultures that adapt to nature and its laws.

2.3.3.2 Shalom Schwartz

Schwartz (1999) generated cultural dimensions as value types. He lists seven different value types, which include: embeddedness, intellectual and affective autonomy, hierarchy, mastery, egalitarian commitment, and harmony.

The cultural concept of Shalom Schwartz (1994) & (1999), was based on different empirical studies between 1988 and 1992. Schwartz primarily chooses teachers and students from 38 countries as subjects, interviewing 86 samples with a volume of 150-300 questions each. Later on, he extended to 64 countries. According to Schwartz, it is necessary to include emic, i.e.,

culture -specific peculiarities, and ethical characteristics. He bases his study on 45 previously determined individual values, whereby the test subjects are asked to rate this “As a Guiding principle in my life” (Schwartz, 1994, p. 99). Schwartz Value Inventory analyzes seven cultural values:

Embeddedness: The value of Embeddedness, in earlier papers of Schwartz described as Conservatism and later changed (see Schwartz (2011)), describes cultures that are characterized by very close group relationships. In doing so, the group pursues common interests and strives to preserve the present, with the associated awareness of tradition, security, and adaptation.

Intellectual Autonomy: Within the framework of the autonomy value, Schwartz names the values of intellectual autonomy. Generally, people are understood as independent individuals who pursue their interests. The researcher primarily combines human self-reference with intellectual autonomy.

Affective Autonomy: The variable affective autonomy, on the other hand, and compared with intellectual autonomy living out feelings.

Hierarchy: Schwartz associates the value of hierarchy with the degree of the legality of hierarchical allocation of roles and resources within a culture.

Mastery: This value describes the extent of the opportunities in culture to assert oneself in this society through one's own efforts, to gain a specific position, and to be able to change one's environment.

Egalitarian commitment: Schwartz associates this value with the commitment, which goes beyond self-interest. This means that cultural members voluntarily feel obliged to promote the well-being of third parties.

Harmony: Schwartz has no specific characteristics associated with this value. Instead, he describes the following expressions to specify the value: “world peace”, “social justice”, and “willing to help” (Schwartz, 1994, p. 105).

After statistically evaluating the correlations between these seven values, Shalom H. Schwartz came up with the formulation of two general dimensions. On the one hand, there is the dimension of intellectual and affective autonomy vs. embeddedness and, on the other hand, about hierarchy and mastery vs. egalitarian commitment and harmony.

2.3.3.3 Erin Meyer

The culture map of Erin Meyer (2014) appeared in 2014. In this book, she describes invisible boundaries in global business. According to Golpewar (2021), her findings are often used in practice of intercultural management. Her cultural map, with eight different cultural variables, is more a personal description and practical example, and the result of her consultancy. She displays in various practical examples the outcome of cultural differences in business surroundings. Nevertheless, she connects all her variables with the classic theories from Hall, Trompenaars, and Hofstede. Therefore, she earns a precise recognition, where, for example, and among others Fond Trompenaars, states: “I highly recommend this book to both the professional and leisure reader. Erin has shown herself to be one of the main representatives of the next-generation scholars who combine deep conceptual models with very practical applications A must-read!” (Meyer, 2014, p. 284).

She states the following eight cultural variables:

Communicating: Low-context and high context

Evaluating: Direct negative feedback and Indirect negative feedback

Persuading: Principles-first and Applications-first

Leading: Egalitarian and Hierarchical

Deciding: Consensual and Top-down

Trusting: Task-based and Relationship-based

Disagreeing: Confrontational and Avoids confrontation

Scheduling: Linear-time and Flexible-time

2.3.3.4 GLOBE Study

The GLOBE Study (Global Leadership & Organizational Behavior Effectiveness) Foundation aims a study with middle managers in 62 countries and forms nine different dimensions, which in part overlap with the dimensions of Hofstede and Schwartz. They name assertiveness, institutional collectivism, in-group collectivism, future orientation, gender egalitarianism, humane orientation, performance orientation, power distance, and uncertainty avoidance (Dastmalchian, 2018). The project, which has been running since 1993 (see IFIM, 2003: 4), aims to analyze the influence of culture on management styles and company processes and their effectiveness. Over 170 scientists from 61 cultures are involved in the project to avoid western bias as much as possible.

According to the Institute for Intercultural Management (IFIM 2003: 5), the aim of this “GLOBE Study” project is, among other things, to examine and modify the Hofstede results in terms of their topicality and to reduce previous weaknesses. The analysis of these dimensions is based on both quantitative and qualitative instruments. The quantitative surveys by the questionnaire are carried out in two ways. On the one hand, the current state (as is) and on the other hand, a desired future state (should be) are asked. So far, the questionnaires have been distributed among 17,000 middle management subjects from 61 different countries. The test subjects are employed in one of the three branches of industry: food processing, financial services, telecommunications. With the help of the model results, country clusters are formed, among other things, in which those countries with management-relevant commonalities are summarized.

Overall, the Project GLOBE Study identifies nine dimensions, which are as followed:

Uncertainty Avoidance: This first dimension reflects society’s extent to avoid uncertainty situations through rules, rites etc.

Power Distance: Power distance measures the degree of acceptance of uneven power distribution.

Collectivism I: This dimension reflects the community orientation concerning society as a whole.

Collectivism II: This dimension measures loyalty to the group (such as a family, company).

Gender Egalitarianism: The fifth dimension reflects a society's efforts to address gender differences.

Assertiveness: It illustrates the extent within a society of being presumptuous and aggressive in interpersonal relationships.

Future Orientation: This dimension reflects the extent of society to think and act future-oriented.

Performance Orientation: This performance-oriented component measures the value of society for exceptional achievements and performance increases and the extent to which these are promoted and rewarded.

Human Orientation: This last dimension reflects the importance, promotion, and distinction of fairness, kindness, consideration, and other similar factors within society.

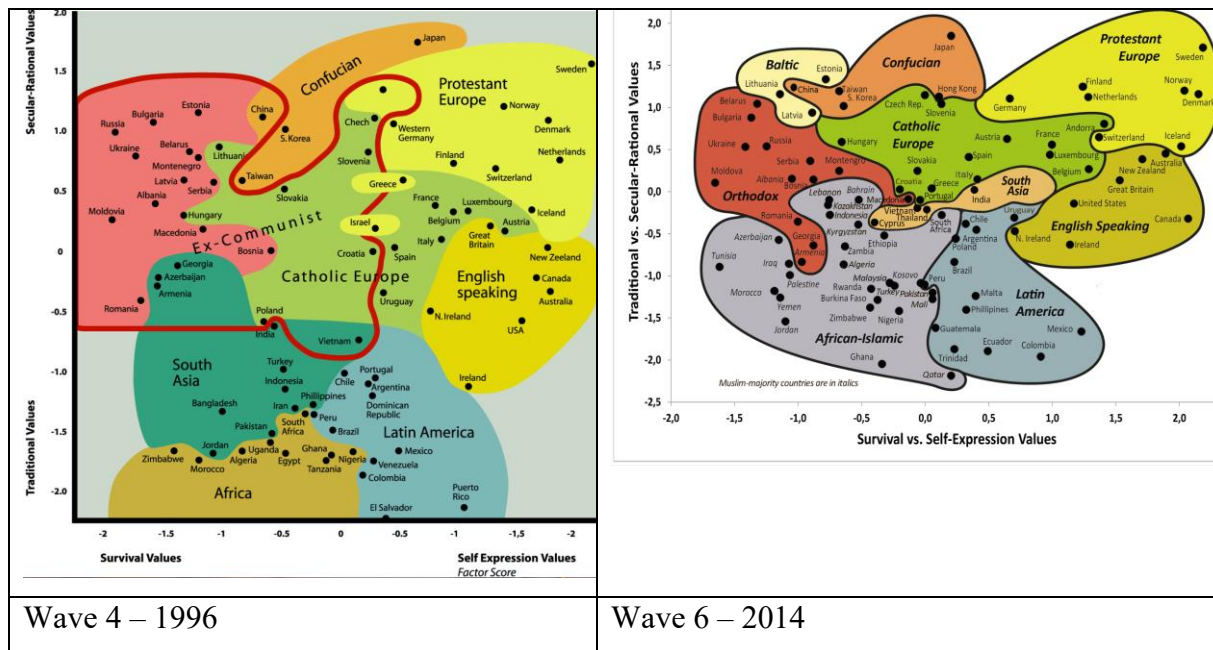
2.3.3.5 World Values Survey

The World Values Survey is another model that tries to capture and find cultural areas. In contrast to the other models, unfortunately, this one does not have precise, consolidated cultural dimensions. They instead took a general status quo of different cultural belonging topics. They form a culture map in a quadratic coordinate system with “Traditional Values vs. Secular-Rational Values” on the vertical line and “Survival Values vs. Self-Expression Values” on the horizontal line. The middle between both values is point 0.

They took data in seven questionnaire waves in 77 countries and more than 129,000 peoples about people’s values, beliefs, religion, environment, family, politics, etc. and questioned a sample from the general majority population (Haerpfer, 2018). In addition to the dimensions of Hofstede and Schwartz, and similar to the GLOBE Study project, the World Values Survey data is alternatively used since they do not have their cultural dimensions (Dastmalchian, 2018). Therefore, the database is useful to find and filter specific trends in one of the questioned datasets.

Moreover, the main aim is to present the change in culture over time. Similar to the quote of Weber (2011), who describes culture as “A particular society at a particular time and place.” They find evidence that cultural values change over time. Since their questionnaires were taken in seven different waves from 1981 until 2015, they can present the movement within their cultural map (Puranen, 2015). Figure 7 shows a comparison of wave four from 1996 and wave six from 2014:

Figure 7: Cultural Map comparison between wave four and six – 1996 – 2014; Source Puranen (2015)



2.3.3.6 Gert Hofstede

Gert Hofstede was one of the pioneers of cultural dimensions in modern humanities science. His original work “Cultural Dimensions in Management and Planning” from 1984 was based on the data of a two-phase study, first from 1967-1969, where Hofstede questioned over 60,000 employees from IBM in 53 countries and second, from 1971-1973, where he asked again over 60,000 respondents in 71 countries. Originally the questioning was for internal use of IBM and its 72 subsidiaries only and not for studying cultural differences. Later on, Hofstede (2001) used the material as a foundation for cultural research. The questions dealt primarily with the employees’ values concerning the work situation and formed part of a more extensive list of questions about the personal attitudes of employees. The database was vast and included employees from 38 professions and 20 languages. As (Portugal, Ribeiro, & Frias, 2014) state, Gert Hofstede’s initial work “Cultural Dimensions in Management and Planning” (1984) has been used in over 655 articles in international business studies, until 2012, which shows the high importance. Moreover, and till today, his initial two books “Culture’s consequences: International differences in work-related values” from 1980 and “Cultures and Organizations: Software of the mind” from 1991 have been cited over 219,611²¹ times.

²¹ (Google Scholar on the 12.01.2023).

This shows that his work is the most popular / one of the most popular cultural theories nowadays. However, the high interest in Hofstede's work seems to be due to the quantitative approach, even if this also gives rise to criticism (Boensch, 2013). Scherm and Süß (2001) question whether culture can be ascertained with standardized written surveys. They explain the great interest in Hofstede's work in the context of international management primarily because his research systematically attempted for the first time to quantify the effect of culture on various aspects of management: "Hofstede has (...) succeeded in getting culture out of its role of the" ex-post explanation "for unexplained variances in management, increasing the sensitivity of management (and also science) for it and increasing it as an important influencing factor establish" Scherm and Süß (2001, p. 29). Triandis (2004) also concludes that: "(...) each of the important dimensions of cultural variations has been uncovered by Hofstede. The dimensions he identifies are relevant to how people function in industrial societies. We can look at how these dimensions influence psychological processes and organizational behaviors in many cultures" Triandis (2004, p. 93).

Furthermore, critics of Hofstede's research doubt that employees of one particular corporation like IBM can serve as a sample to learn about the culture of the respective country "in general". Hofstede argues in this context: "They say: We know the people from IBM. These are very special people, always with a white shirt and tie, they are not representative of our country at all. Those who say this are quite right: IBM people are not a representative sample of the country's population. However, as already said [in the previous section of his book], samples for comparative country studies need not be representative, but only functionally equivalent. IBM employees are a small, but very well-composed sample. Employees of multinational companies in general, and in the case of IBM in particular, are attractive sources of information for comparing national characteristics, since they are similar in many ways - except for nationality - in terms of their employer (with their common corporate culture), their type of work and - for comparable occupations - their level of education. The only criterion for which there are systematic and lasting differences between national groups within such a homogeneous multinational whole is the nationality itself - the national environment in which people grew up before they came to this employer. Therefore, the comparison of IBM subsidiaries shows cultural differences with unusual clarity" (Hofstede, 2001, p. 363).

Moreover, there is a general critic of Hofstede as a researcher. Rachel Baskerville's (2003) article, "Hofstede never studied Culture", is one of these examples. Hofstede (2003) answers in the same Journal that "Baskerville does not realize that there exist different paradigms in the social sciences about the meaning of "Culture", leading to different research approaches. Her

arguments are, therefore, largely irrelevant to cross-cultural accounting research. [...] [and] some self-proclaimed fans of my work make me feel that with such friends, I do not need any enemies.” (Hofstede, 2003, p. 811).

As a result, Hofstede first developed four fundamental overarching dimensions for the characterization of cultural differences based on correlation and factor analyzes, which were based on the following, recently revised cultural definition: “Culture is always a collective phenomenon because you at least partially share it with people who live or lived in the same social environment, i.e., where this culture was learned. Culture consists of the unwritten rules of social play. It is the collective programming of the mind that distinguishes the members of a group or category from people from another.” (Hofstede, Hofstede, Mayer, & Sondermann, 2009, p. 4)

He lists “his” cultural characteristics and transforms them into four cultural dimensions. In his work, these four essential characteristics include power distance, uncertainty avoidance, collectivism versus individualism, and femininity versus masculinity. Later on, he added long-term orientation and indulgence vs. restraint (Hofstede, 2001). In the following part, the dimensions are described in detail:

Individualism vs. Collectivism: Loose relationships between individuals characterize individualistic societies. Everyone cares more about themselves and their immediate family. Expressing your opinion is a unique feature here. Tasks take precedence over relationships. Collectivist societies characterize thinking in "we" terms and thus also the integration into closed groups, which affect all areas of life and provide security - in return, however, require loyalty. Harmony should be preserved, and direct discussion avoided. Relationships have priority over tasks (Hofstede, 2001).

Power distance: The power distance dimension expresses the extent to which it is expected and accepted that power is unevenly distributed in a society. In countries with little power distance, employees expect to be involved in the decisions. Privileges and status symbols meet with disapproval. In countries with a massive power gap, employees expect to receive instructions. Privileges and status symbols for managers are expected and are accessible. There are significant differences in salary within the hierarchy (Hofstede, 2001).

Uncertainty Avoidance: Uncertainty avoidance measures the extent to which people feel threatened by uncertain and unknown situations. In societies with reduced uncertainty avoidance, uncertainty is a regular occurrence in life and is accepted daily as it comes. In societies with a high uncertainty avoidance level, the inherent insecurity is constantly perceived

as a threat to be tackled. There is a subjective feeling of fear, and only known risks are accepted (Hofstede, 2001).

Masculinity vs. Femininity: Masculine societies differ from feminine ones by clearly defined gender roles. Money and material things are essential. These societies sympathize with the strong / the best and live to work. Managers should be determined. There is competition among colleagues where conflicts are resolved. Feminine societies are expected to be humble. These societies sympathize with the weak and work to live. The emphasis is on equality and solidarity. One tries to settle conflicts by searching for a compromise (Hofstede, 2001).

Confucian dynamics - or Long-term vs. Short-term Orientation: The Confucian dynamic represents a continuum shaped by the endpoints of long-term or short-term orientation. Long-term orientation is characterized by the values: perseverance (persistence), the order of relationships according to status, and compliance with this order, thrift, and shame. The opposite pole of short-term orientation is formed by values such as personal steadfastness and firmness, protection of the face, respect for tradition, and a reply to greetings, favors, and gifts (Hofstede, 2001).

Indulgence vs. Restraint: Indulgence expresses how much a culture accepts the self-actualization of each individual. High value cultures accept people or groups who do not correspond to average so called fringe groups because freedom is considered an important value. In cultures with a low expression, this is not the case (Hofstede, 2001).

Kolman et al. note that: "The fifth dimension mentioned, long versus short-term orientation, is not based on Hofstede's original study, but on later work of a group of scholars who looked at national cultures from an explicitly Chinese frame of mind (...)." (Kolman, Noorderhaven, Hofstede, & Dienes, 2003, p. 76). Scherm and Süß (2001) add that this fifth dimension concerns values that are well recognized in Western people's mindset but are not taken into account by researchers there. "The fact that the last dimension was only discovered by researchers from another cultural area can be seen as a sign of the cultural distortion of perception in comparative culture research. (...) [Also] the fact that the fifth dimension was only recognized later (...) also raises doubts about the completeness and generality. " (Scherm & Süß, 2001, p. 31).

2.3.4 Conclusion

For over seventy years, different researchers have tried to put culture into specific values and norms to explain differences. Furthermore, the previous part has shown that the research field "Culture" attracts nowadays not only anthropologists, sociologists, and psychologists, but

rather researchers from other fields, which try to get an explanation for their research questions (Aggarwal & Goodell, 2014). One of these examples is economists, who use culture to explain values on different levels and fields (Zingales, 2015). After the description of collective action as a general appearance of “culture” in the literature for example in Webers’ (1905) main contribution, Kluckhohn (1951), was one of the first who introduced culture in a broad context of human behavior. Nowadays, culture is divided into historical and modern definitions.

The beginning of the historical, cultural theories made Kluckhohn and Strodtbeck (1961), who were the first, to defined culture with values and norms. The second classic representative of cultural research came from Hall and Hall (1990). Both researchers based their models on extensive literature bases.

The modern theories of culture were mainly, besides Meyers (2014) contribution, based on extensive questionnaires. The of the “older” cultural models of the modern theories are from Trompenaars (2005) and Schwartz (1999). Meyers (2014) contribution is not based on a survey, whereas she divined her model through practical use in her business consulting. The GLOBE Study (2018) was done by different researchers from all over the world, similar to the World Values Survey (2018), which on the other hand updated their results through difference questionnaire waves until today, to show the change of culture. This one was measured in, so far, seven waves, which meant that this theory was more about the change of values and norms in different cultures, similar to Weber (2011), who describes culture as “A particular society at a particular time and place.”. Lastly, and probably most famous are the cultural dimensions from Hofstede (2001). Hofstede initially formed four dimensions and added later on two dimensions more. Tables 5 to 7 provide an overview of all the mentioned theories and concepts, including a comparison.

Even though that there are researchers who ask for a general overhaul of the concept of culture (Rathje (2006) & (2009)), all of these cultural models are still used nowadays for different research purposes (Maznevski, DiStefano, Gomez, Noorderhaven, & Wu, 2002). The overwhelming part of the research states that culture can be captured in a cultural dimension way (Schwuchow, 2006). Even though that not all researchers agree with the various individual cultural theories, for example, and among others, Witte et al. (2020), all cultural theories are still used till today for different research purposes, for example, and among others, Guiso et al. (2008) use the World Values Survey data, Chui et al. (2016) use Schwartz’s cultural dimensions. However, Hofstede’s theory is the widest accepted and most used one in the present literature (Portugal Ferreira, Ribeiro Serra, & Frias Pinto, 2014).

In conclusion, the last part presented the change of the different culture theories and the change during the years, including the importance for economist to identify different cultural values in models which can be used for institutional, organizational, and individual research in different areas. The development of the different theories trying to explore culture and its relation on economics is widely visible. Reaching back to the last two sections (2.2), the identified theories showed the institutional influence on organizations and individuals. Therefore, it seems to be clear that cultural values influence individuals and consequently, through the mentioned theories, organizations. Therefore, culture plays an important role and has a relevant impact on finance decision making, and as in the case of this study, specifically on the choice of the capital structure and risk-taking of the firms.

However, research has shown that culture is one of many relevant impacts on economics and financial decision-making. Like culture, religion has an individual and relevant impact on economics and financial decision-making. On the one hand, individually as itself, and on the other hand, as the mainspring of culture, and vice versa. Therefore, the following part (2.4) will deal with the influence of religion on individuals, organizations, and institutions.

Table 4: Summary of the main datasets on the national Culture I; Source: Authors' compilation based and further developed on Aggarwal et al. (2016)

Datasets	Cultural dimensions / Value types	Years of data collection	Countries covered	Survey respondents	Remarks
Hofstede	Four dimensions: 1. Individualism vs. Collectivism 2. Power Distance 3. Uncertainty Avoidance 4. Masculinity vs. Femininity Later added: 5. Long-Term Orientation 6. Indulgence vs. Restraint	1967 – 1969 & 1971 - 1973	40 countries in the first wave and 53 countries in the second wave	IBM employees	The most widely cited dataset on national culture.
Kluckhohn / Strodtbeck	Five dimensions: 1. Human Nature Orientation 2. Man – Nature Orientation 3. Relational Orientation 4. Time Orientation 5. Activity Orientation	Theoretical Contribution	General Contribution	None	Theoretical Contribution
Hall	Four cultural characteristics: 1. High / Low Context 2. Space 3. Monochronic / Polychronic Time 4. Fast / Slow Message	Theoretical Contribution	General Contribution	None	Theoretical Contribution
Trompenaars	Seven dimensions: 1. Universalism / Particularism 2. Individualism / Communitarism 3. Neutral / Affective 4. Diffuse / Specific 5. Status achievement / Status ascription 6. Human-Time Relationship 7. Human-Nature-Relationship	Late 1980s and early 1990s	50 countries	Managers (75%) and administrative staff (25%)	
Schwartz	Seven value types: 1. Embeddedness 2. Intellectual Autonomy 3. Affective Autonomy 4. Hierarchy 5. Mastery 6. Egalitarian commitment 7. Harmony	1990s	Initially 22 countries, later extended to 64 countries	Elementary school teachers and college students	The seven value types are consolidated into two broad dimensions: 1. Autonomy vs. Embeddedness 2. Hierarchy and mastery vs. egalitarian commitment

Table 5: Summary of the main datasets on the national Culture II; Source: Authors' compilation based and further developed on Aggarwal et al. (2016)

Datasets	Cultural dimensions / Value types	Years of data collection	Countries covered	Survey respondents	Remarks
Meyer	<p>Eight cultural variables:</p> <ol style="list-style-type: none"> 1. Communicating 2. Evaluating 3. Persuading 4. Leading 5. Deciding 6. Trusting 7. Disagreeing 8. Scheduling 	Theoretical Contribution	General Contribution	None	The cultural variables were mainly developed for business consulting of managers.
GLOBE Study	<p>Nine dimensions:</p> <ol style="list-style-type: none"> 1. Assertiveness 2. Institutional collectivism 3. In-group collectivism 4. Future orientation 5. Gender egalitarianism 6. Human orientation 7. Performance orientation 8. Power distance 9. Uncertainty avoidance 	1990s	62 countries	Middle managers	Each of the nine cultural dimensions is divided into <ol style="list-style-type: none"> 1. belief score (i.e., actual practice) 2. value score (i.e., desired practice)
World Value Survey	A Survey about people's values and beliefs towards family, environment, politics, religion, etc.	Seven waves since 1981 (The last wave 2017-2018)	77 countries	Sample from general majority population	No clearly consolidated cultural dimensions. However, the survey detected different value changes during the years.

Table 6: Summary and comparison of the cultural dimensions; Source: Authors' compilation based and further developed on Reimer (2005)

Hofstede	Kluckhohn / Strodtbeck	Hall	Trompenaars	Schwartz	Meyer	GLOBE Study
Individualism / Collectivism	Relational Orientation	High Context / Low Context	Individualism / Communitarism Universalism / Particularism	Intellectual and Affective Autonomy Embeddedness		Collectivism I
						Collectivism II
Power Distance			Status Achievement / Status Ascription	Hierarchy	Leading	Power Distance
					Deciding	
					Persuading	
Uncertainty Avoidance			Universalism / Particularism			Uncertainty Avoidance
Masculinity / Femininity				Mastery		Assertiveness
						Gender Egalitarianism
Long-Term-Oriented	Time Orientation Activity Orientation	Monochronic / Polychronic Time	Human-Time-Relationship		Scheduling	Future Orientation
					Trusting	Performance Orientation
Indulgence			Human-Nature-Relationship	Harmony		
						Disagreeing
			Neutral / Affective		Communicating	
			Diffuse / Specific		Evaluating	
	Human-Nature Orientation			Egalitarian Commitment		Human Nature
		Space				
		Fast / Slow Message				

2.4 The Influence of Religion in Economic and Financial Behavior

Give to Caesar the things that are Caesar's, and to God, the things that are God's.

Bible: Luke 20:25

2.4.1 Introduction

Finance and religion are two research areas that usually do not have much in common. While finance and its theories are based purely on economic numbers, religion is more about belonging and believing. But everyone has to deal with finances on a daily basis, and religion has huge importance in the lives of millions of people around the world. So, what if both research areas are combined? What questions would arise, and where would the connection be? Smith et al. (2021) pose the following transformative research questions to the scientific community: firstly, “How and why do religious values influence the purely economic evaluation of potentially profitable courses of action? When do they enable or preclude entrepreneurial action?”, and secondly, “When and where are religious values (in)congruent with economic motives for entrepreneurial action and with what effect?” (Smith et al., 2021, p. 1). Following this approach, Smith and Sottini (2021) add the question about how religion affects risk-taking. In a different sphere, the entrepreneurship literature also provides examples of the impact of religion on the financial world. Dana (2009, p.88) states: “Asa Chandler, the pharmacist who incorporated the Coca-Cola Company, was a devout Methodist and Sunday school teacher who believed that making money was a form of worship. During the following century, Prime Minister Margaret Thatcher (raised with strict Methodist values) stated, ‘I believe in “Judeo Christian” values: indeed, my whole political philosophy is based on them’ (Thatcher, 1993, p. 509)”. Taylor (2019) continues to say that all of the company Chick-fil-A’s US locations are closed on Sundays due to the founder Truett Cathy’s Christian faith and religious values, even though the business is missing out on 14% of its potential revenue. In other words, the question is to what extent are businesses, managers, and the financial decisions they make motivated by religious belonging and beliefs? And what do we know and what do we need to know about this relationship between religion and finance?

According to researchers, religion has influenced the economy both positively and negatively. On a positive note, it was first mentioned by Adam Smith (1776) that religion influences economics in general. In the 1970s, Boulding (1968) claimed that “for nearly 200 years almost

everything that economists, qua economists have said on [the] subject” of religion stemmed from Smith’s underlying statements (p. 188). Zelekha et al. (2014) added that religion plays a fundamental role in shaping economic activity. Anderson (1988), following Stigler (1982), considered these statements and identified five major economic approaches that combine economics and religion. Smith first offered a theory to explain individuals’ participation in religion based on the human capital theory. Second, he demonstrated the connection between self-interested income maximizers and suppliers of religion. In third place, he added the concept of the supply of religion to the competitive market theory. The fourth area of his analysis dealt with the church as a firm, including its economic effects in the Middle Ages, as a monopoly. Fifth, he sought to demonstrate the self-interest of the clergy and political leaders in the development and growth of individual companies and, later, the whole economy.

Anderson (1988) stated, “Smith was probably the first ‘economic imperialist,’” who “[deserved] credit for a bold extension of economic analysis into an area of human behavior traditionally thought to be beyond the boundaries of economic science: Religion” (Anderson, 1988, p. 1067). A fundamental statement of Smith is that the “terrors of Religion” helped civil society to enforce moral rules and play a central role in self-monitoring moral judgments and reputation. In other words, “religious belief reinforces [...] self-control” (Anderson, 1988, p. 1069), so it is economically rational to have certain forms of religious behavior. Being part of a religious organization gives any individual or organization an advantage. Iannaccone (1998) compared religious groups and churches to “elite clubs” and described the advantages of belonging to them. In addition to an established reputation, e.g., in the form of lower risk for banks or individuals lending money, these benefits would also include higher salaries, safer assets and investments, and greater returns. In Smith’s words, for a “man of rank and fortunes [...], authority and consideration depend very much upon the respect which [...] society bears to him” (Smith, 1776, p. 795).

On a negative note, seventy-five years later, Marx (1844) criticized religion as part of human life and stated in opposition to Smith: “Religious misery is, by one side, an expression of the real misery. Religion is the exhausted creature’s sigh, the state of animus of a heartless world, the spirit of spiritless situations. Religion is the people’s opium.” (Marx, 1844, p. 53).

Thus, several classical writings of Adam Smith and Marx focused on the relationship between economics and religion. Weber went one step further by incorporating the differences among

religions into this relationship. Taking an opposite position to Marx, he introduced a revolutionary idea based on Smith's (Weber, 1905). In his classical work, *Die protestantische Ethik und der Geist des Kapitalismus*, Weber suggests that there is a difference between the economic success of religious and non-religious people. Moreover, he ventured into a new field of research and distinguished Protestant believers from believers of other religious faiths. In his view, Protestants work harder, have greater economic success, and have better attitudes than people of different religious beliefs. Furthermore, he divided the world into Protestant and Catholic countries, states, and regions.

Guiso et al. (2003) note that Weber's Protestant ethics emerge from the interaction of the doctrine of salvation and the concept of good works. Becker and Woessmann (2009) agree with Weber's observation that Catholic regions are economically less developed than Protestant regions. However, more than one hundred and fifteen years later, the reason for this is still controversial and discussed in the research literature. Audretsch et al. (2013) contended that the emergence of capitalism is linked to the Protestant work ethic, and Nunziata et al. (2016) followed Weber and linked the origins of capitalism to Protestant ethical principles. They continued by saying that these principles are more competitive than those of Catholicism because Protestantism emphasizes individualism, hard work, and ethics as prerequisites for success (Weber M. , 1905).

Martin Luther fundamentally changed the Christian doctrine of good works by introducing the idea of the "fulfillment of duties in worldly affairs as the highest form which the moral activity of the individual could assume" (Guiso et al., 2003, p. 229). This goes along with a saying from Luther: "Wer treu arbeitet, der betet zweifach" ('He who works hard prays twice') (Barrenstein et al., 2016, p. 14) and "Arbeiten, dass man Güter kriegt, das ist recht" ('Working to obtain goods, that is right') (Luther, 2016, p. 17). Weber's thesis was that Protestants become more educated because of their superior work ethic, not vice versa, like Luther's idea (Weber M. , 1905).

As a result of these founding and introductory thoughts, researchers have delved into more specific areas. In the last 15 years, various literature reviews have dealt with the relationships between the fields of religion and business and religion and entrepreneurship (Dodd and Gotsis, 2007; Dana, 2009 & 2010; Tracey, 2012; Balog et al., 2013; Smith et al., 2019; Kumar et al., 2022; Sottini, 2022), including an overview of decision-making in relation to religious traditions (Miller, 2020). However, while the focus appears to be on the differences that

religions have in terms of risk-taking behavior and its impact on entrepreneurship activity, none of the existing literature reviews concentrate on the specific field of the effects on financial choices. The present study argues that religious behavior can strongly influence risk investments, wealth creation, or the level of debt, among other financial decisions.

Firstly, the present study will try to capture a more general viewpoint on religion and economic behavior before concentrating on the financial side and will examine two distinct aspects of the relationship between religion and finance. On the one hand, the focus will be on the effects of religion in general compared to non-religion, which represents a growing body of literature. On the other hand, the focus will concentrate on a growing field of research that distinguishes between religions and examines their differences. The center of the analysis is on two major Christian faiths, Catholicism and Protestantism.

In order to provide a valuable framework, the present paper follows the model of religiosity dimensions developed by Cornwall et al. (1986). These authors divided religiosity into an individual mode and an institutional level. The third level of the religiosity dimensions that is added to this model is the organizational level. Consequently, the following part is divided into the review of the influences of religion on finance into three different levels: (1) the influence of religion on economic and financial behavior at the individual level; (2) the influence of religion on economic and financial behavior at the organizational level; (3) the influence of religion on economic and financial behavior at the institutional level.

Like Miller (2020), this study employs the snowball method to identify, review, and analyze the existing literature. First, the terms “finance,” “religion,” “capital structure,” “debt,” and “equity” were searched in the electronic databases Science Direct²², Scopus²³, Springer²⁴, and Web of Science²⁵. Additionally, the major works that were referenced frequently in various articles, such as Adam Smith’s (1776) and Max Weber’s (1905), among others were included. The next section contains the literature research described, divided into the three levels of religious influence.

²² See <https://www.sciencedirect.com>

²³ See <https://www.scopus.com>

²⁴ See <https://link.springer.com>

²⁵ See <https://www.webofscience.com>

2.4.2 The Influence of Religion on Economic and Financial Behavior at the Individual Level

“Jesus tells us in the Gospel that no one can serve two masters. We either serve God, or we serve money.” - Pope Francis²⁶

*“Arbeiten, dass man Güter kriegt, das ist recht“
(Working for goods is right.) – Martin Luther²⁷*

Religion and individuals' economic and financial behaviors have been studied extensively by researchers. A number of factors, including economic decisions, well-being (St. George and Mc Namara, 1984; Ellison 1991; Perry, 1998), social connections (Gruber, 2005), criminality (Evans et al., 1995; Pope et al., 2014), ethical judgment (Pescosolido and Geogianna, 1989; Durkheim, 1951 [1897]), consumer attitudes (Hess, 2012), leadership practices (Small, 2020), job satisfaction (Alewell et al., 2022), and multiple identities as experienced by individual religious, social, and financial actors (Smith et al., 2022), have all been studied.

Religious influences are enormous. In fact, the “study of religion has enjoyed salience and legitimacy within sociology, psychology, anthropology, history, and political science” (Iannaccone, 1998, p. 1465). The following part though deals exclusively with the impact of religion on individual economic and financial behavior.

Richard Freeman (1986) pioneered the general field of research with personal religiousness, not limited to a single religion, and economic success. He surveyed young men about their church-going habits, social background, time spent on activities, labor, and social behavior. According to his research, church attendance is associated with going to school, working, and escaping inner-city poverty. Furthermore, he found evidence that church attendance was negatively correlated with welfare-receiving families. Overall, his results almost 35 years ago indicated that personal religiousness significantly influences the economic success of an individual and his or her family and community. Nearly two decades later, Gruber (2005) came up with similar findings when he addressed the question “Is religion good for you?” to which he responded with a definite “Yes” (Gruber, 2005, p. 1). His results show that religious

²⁶ (Wenders, 2018, p. 12)

²⁷ (Luther, 2016, p. 17)

participation is associated with a higher level of education and income and a reduced need for social welfare payments. Hess (2012) investigated how religion affected personal financial decision-making. His results suggest that people who adhere to strong religious principles tend to have significantly higher credit scores, lower credit card balances and fewer foreclosures and bankruptcies. Furthermore, they invest with higher ethical standards and take fewer risks. In their 2012 analysis of the differences between religious and non-religious households in terms of individual financial decisions and economic attitudes, Renneboog and Spaenjers (2012) found that individuals in religious households have longer planning horizons in terms of money, are more risk averse, more trusting, and have a much higher sense of financial responsibility.

With respect to the second goal, the differential impact of certain Christian religions on economic and financial behaviors, Renneboog and Spaenjers (2012) demonstrated that there are differences between Catholics and Protestants as to risk-aversion and stock market investing. They concluded that Catholic households invest less in the stock market and are less risk averse than Protestant households. Benjamin et al. (2016) reported similar findings on risk aversion. They followed Iannaccone (1998), who introduced the economics of religion twenty years earlier, and showed that economic choices vary according to religion. Also, they found evidence that Catholics are more risk-averse than Protestants when it comes to making financial decisions. However, they discovered only marginal or no links between religion and work effort or norm preference.

According to Guiso et al. (2003), individuals with religious beliefs tend to have “good” economic attitudes, with “good” being defined as having greater per-capita income and wealth growth. Furthermore, they demonstrated that Christian religions are positively associated with attitudes conducive to economic growth. In addition, they provided evidence that Catholics distrust the legal system and are considerably more inclined than Protestants to evade taxes and accept bribes (Guiso et al., 2003).

Religion and gambling attitudes were investigated by Kumar et al. (2011). They showed that investors tend to be more prone to gambling with stock options in regions where the Catholic population is larger than the Protestant population. In addition, the lottery stock premium is more significant. These results imply that religion fosters gambling behaviors, which significantly affects investors’ portfolio choices (Kumar et al., 2011).

Rinard (2017) went down a different path and described religious benefits in the order of Pascal's wager, noting that it is always better to believe in religion than not. She argues that benefit payouts, whether economic or not, are still higher for a religious individual, regardless of any other influences. Similar research was done by Miller and Hoffmann (1995), who used Pascal's wager to propose that religious behavior is risk-averse and non-religious behavior is risk-taking. They also divided their sample into categories based on gender and race and found that female believers take fewer risks than do male believers, providing proof that gender does make a difference as to religious beliefs and risk-taking. This view connects risk preference with practical, financial investments.

In conclusion, most studies show that religion has a positive effect on financial behavior in regard to, the impact of religion on individual financial decision-making. Regarding the differential impact of religions, research suggests that Protestants are more likely to take personal financial risks and invest in stocks for the long term. However, there is a higher percentage of Catholics involved in stock options and gambling. Thus, it appears that there are also differences between Protestants' and Catholics' individual financial behavior.

Table 7 provides an overview of studies that analyze the relationship between religion and individual economic behavior. Some trends emerge from this review. First, religion's role in personal financial success (income, wealth, etc.) and the impact of religion and different beliefs on risk-taking of various types and degrees are the main research subjects. Second, the main focus was to understand how religion compared to non-religion affected individual behavior. Third, in a few cases, researchers have compared diverse traditions, mainly Catholic and Protestant ones. Finally, from an empirical point of view, the majority of studies have focused on the United States, followed by some studies of other Western countries.

Table 7: Overview of papers investigating the Influence of Religion on Individual Economic Behavior; Source: Authors' compilation

Author	Year	Country	Religion	Findings
Freeman	1986	USA	Religion vs. Non-Religion	Their findings show that going to church is related to lower inner-city ownership, better work activity, no or less need for welfare aids, and better education.
Miller and Hoffmann	1995	USA	Religion vs. Non-Religion	They show a connection between religion, gender, and risk aversion. Their results also show that female believers are more risk-averse than male believers and believers are more risk-averse than unbelievers.
Iannaccone	1998	USA & Protestant Country Comparison	Christian religions	They make a theoretical contribution regarding the economic impact of religion, with the result that religion affects economic decisions.
Guiso et al.	2003	66 Countries	Catholic, Protestant, Judaism, Muslim, Hindu, Buddhist, other religions	“Good” economic attitude is associated with all religious beliefs.
Gruber	2005	USA	Religion vs. Non-Religion	Religion is connected to several economic indicators, such as higher levels of education, income and marriage, and lower levels of welfare aids, and divorce.
Kumar et al.	2011	USA (States)	Catholic vs. Protestant	These authors conjecture that gambling propensity is stronger in regions with a higher concentration of Catholics than Protestants.
Renneboog and Spaenjers	2012	Netherlands	Religion vs. Non-Religion vs. Catholicism vs. Protestantism as a division of Christian religion	Religious and non-religious households have different economic attitudes and financial decision-making processes. Religious individuals are more trusting, have stronger bequest motives and longer planning horizons in terms of money. Also, Catholics are more risk averse, and Protestants are more likely to save.
Hess	2012	USA	Religion vs. Non-Religion	There is a link between religiosity and personal financial behavior in that religious households have lower credit card debt, higher credit scores, and fewer bankruptcies. Furthermore, religious households conform to stronger social norms, have higher ethical standards and take less risks.
Parboteeah et al.	2015	27 predominantly Christian Countries	Christian religion	They found that aspects of a country's profile affect individual entrepreneurship differently and that a country's level of investment in knowledge serves as a contingency factor in that milieu. In addition, the study provides evidence of the effect of religion beyond the impact of national culture.
Benjamin et al.	2016	USA	Religion vs. Non-Religion vs. Catholicism vs. Protestantism as a division of Christian religion	They did not find evidence that religion affects work effort, discount rates, or dictator game generosity. Furthermore, they only observed a marginal impact of religion on norms and preferences.

2.4.3 The Influence of Religion on Economic and Financial Behavior at the Organizational Level

Besides the influence of religion on individuals, a large body of research also links religion to organizational behavior. In the same way as on an individual level, economic factors have been examined in different shades and linked to religious values or specific religions. Some of the leading research streams include the relationship between religion and key financial and organizational issues such as religion and financial reporting, religion and debt, and religion and investment risk (or corporate risk-taking), as well as others pertaining to broader corporate choices²⁸, such as the impact of religion on general management, responsible investment or entrepreneurship. To analyze the impact of religion on crucial financial and organizational issues, the mainstream assumes what is known as the headquarters effect. This means that religiosity or the presence of a religious majority where the company has its headquarters influences its financial choices.

As with the individual level of analysis, the main body of literature at the organizational level can be divided into three categories. First, researchers have looked at the influence of religion versus non-religion on corporate financial behavior. Secondly, several studies have investigated the variations within Christianity, namely, the variations in Catholic or Protestant beliefs and attitudes. Most of these studies were conducted in the United States or with US data. Only a few others took other countries into account or focused on them. A third area of research has examined other faiths, such as Islam (Baele et al., 2014; Minhat and Dzolkarnaini, 2017; Gümüşay et al., 2020) and Eastern religions, such as Buddhism and Hinduism (Shen & Su, 2017).²⁹

The influence of religion on economic and organizational behavior has numerous effects and testing fields. The main focus of the growing body of literature is the interrelationship between the religious majority at the company's location and the headquarters effect on the company's financial behavior. In particular, the research aims to shed light on how religion affects debt levels, debt repayment terms, financial reporting misconduct, and risk-taking in investments and firms.

He and Hu (2016) found evidence that bank loan terms vary for companies in areas with different levels of religiosity. Values such as risk aversion, ethical behavior, and honesty are

²⁸ This research paper does not enter this field.

²⁹ This field of research is not covered by the present paper.

essential for both borrowers and lenders. These values are associated with religiosity, which leads to the assumption that the more religious borrowers are charged lower interest rates. Firms in less religious areas have more debt financing and worse credit ratings than companies in more religious areas, according to Cai and Shi (2017). These findings are consistent with the results of another study about banks' risk-taking, which offers proof that banks in more religious areas take fewer risks and hold safer assets, leading to better ratings (Adhikari & Agrawal, Does local religiosity matter for bank risk-taking?, 2016). Adhikari and Agrawal (2016) came to similar conclusions as Hilary and Hui (2009). Departing from prior research, these authors suggest a link between individual religiosity and risk aversion and argue that firms located in countries with a higher degree of religiosity have lower risk exposure, as measured by the variance in equity returns or return on assets (Hilary & Hui, 2009). They also noticed that investments by more religious firms are less risky because they choose their following investment wisely, which led these authors to the conclusion that these firms have lower growth and investment rates. Furthermore, they link CEOs' religiosity and risk aversion to the organization's actions (Hilary & Hui, 2009).³⁰ Additionally, Hilary and Hui (2009) found that "fraud, lawsuits, sexual harassment, or accounting irregularities tend to stay away from religious counties" (Hilary & Hui, 2009, p. 472). Similar findings were reported by Grullon et al. (2010). They found that companies that had their headquarters in more religious areas—particularly those with a higher percentage of Protestants—practiced less aggressive management, faced fewer lawsuits and compensated their management staff less.

Accounting irregularities have been tested separately by Dryeng et al. (2012) and McGuire et al. (2012). Their findings are similar, showing that firms in religious areas are less likely to engage in financial reporting irregularities and that managers in these areas are more likely to be averse to litigation risk. Additionally, McGuire et al (2012) offer evidence that, in contrast to firms in non-religious locations, these enterprises favor actual earnings over the manipulation of accruals. Dryeng et al. (2012) add that firms based in very religious areas are less likely to use tax sheltering strategies and are more forthcoming when sharing negative news in their voluntary disclosures. Following these authors, Young (2013) discovered significant influence of culture, values, and religion on accounting practices. A study by Omer et al. (2018) added results showing that audit offices in highly religious areas "are more likely to issue going-

³⁰ This view goes along with the connection found by Nielsen and Nielsen (2013) who combined institutional economics (North D. C., 1990) and the upper echelons theory (Hambrick & Mason, 1984).

concern audit opinions, consistent with a more skeptical assessment of mitigating factors.” They also concluded that “additional tests provide direct evidence consistent with the argument that these audit offices are more risk-averse in issuing going concern opinions” (Omer et al., 2018, p. 811).

In reference to banks, the Holy See states: “If, on the one hand, credit-worthiness demand a prudent activity of selection for identifying the worthy beneficiaries capable of innovation, protected from unhealthy collusions, then, on the other hand, to withstand effectively the risks encountered, the banks must have proper management of assets, so that an eventual division of the losses may be limited to a greater extent and may fall about all on those responsible for losses.” (Ladaria et al., 2018, p. 10). Kanagaretnam et al. (2015) demonstrated that banks in more religious areas have lower risk levels and are less likely to encounter financial difficulties, which is consistent with the Holy See’s demands. In other words, bank customers had smaller loans, secured by safer assets. Comparable results were obtained by Adhikari and Agrawal (2016). As Kanagaretnam et al. (2015), they investigated whether local religiosity influenced risk-taking in banking. They also found that banks in more religious locations tend to have lower idiosyncratic tail risk, are less prone to crises, and have a less volatile stock returns and stock prices, in accordance with the study and findings of Hilary and Hui (2009). Also, in line with McGuire et al. (2012), firms hold safer assets, generally growing slower but nevertheless generating a reliable and regular income. This means that instead of taking high-risk loans with high interest rates, firms use less secure assets as collateral. They tested CEOs’ level of religiosity in addition to the overall level and found that an individual’s level affects the organization (Adhikari & Agrawal, Does local religiosity matter for bank risk-taking?, 2016). Shu et al. (2012) found that mutual funds’ speculative risk behavior differs depending on the local religious beliefs. Specifically, they found evidence that managers in high Catholic areas trade more aggressively, have higher portfolio concentrations, and their firms show higher return volatility. Conversely, in areas with a higher percentage of Protestant believers, the results are reversed.

Another recent study linking religion to corporate risk comes from Diez-Esteban et al. (2019). Their results indicate that companies from Protestant nations tend to take fewer risks than those based in Catholic or Islamic ones. In addition, they present evidence that companies with large institutional investors as shareholders are less affected by these findings than individual or family-owned businesses.

Another research stream has examined religion and bank loan terms and whether religious norms influence corporate debt financing (Cai & Shi, Do Religious Norms Influence Corporate Debt Financing?, 2017; He & Hu, 2016). Evidence has been provided by He and Hu (2016) that lenders value the traits of religious adherents, such as honesty, ethical behavior, and risk aversion. These characteristics influence interest rates, loan size, and the number of loan covenants, as well as the availability and costs of bank loans. In summary, all these traits favor firms located in religiously inclined areas (He & Hu, 2016). Cai and Shi (2017) obtained similar results, such as better credit ratings, lower yields on bonds, and fewer covenants. However, in contrast to He and Hu (2016), they document that firms in more religious areas use less debt financing (Cai & Shi, 2017). Chen et al.'s (2016) findings point to low-interest loans in countries with high religiosity. Yet, in terms of the legal environment, their analysis indicates that religious values play a more significant role in countries where creditors have weaker rights, supporting the findings of La Porta et al. (1999), Stulz and Williamson (2003), and Guiso et al. (2003).

El Ghoul et al. (2012) report that firms in more religious countries enjoy better and cheaper equity financing. However, their research is limited to firms with low visibility because these businesses are part of local networks that support one another. Therefore, these companies are more sensitive to local economic and social factors. Nevertheless, they provide substantial evidence that religion facilitates economic development (El Ghoul et al., 2012).

Baxamusa and Jalal (2014) examined the capital structure of companies. Their research demonstrates that a 1% increase in Protestant religiosity in a country leads to 0.4% lower leverage and fewer frequent debt issuances. Furthermore, an increase in Protestantism significantly affects firms' adjustment speeds toward the target capital structure. Their findings point to a difference between Protestant- and Catholic-dominated regions and companies, and that firms in cities and states with a Catholic majority have higher levels of debt (Baxamusa & Jalal, 2014). They tested their model with a dataset from different countries and a US dataset (Baxamusa & Jalal, 2014).

Jiang et al. (2015) found that family firms founded by religious entrepreneurs have lower leverage and make fewer investments in fixed and intangible assets than non-religious entrepreneurs. However, they admit that these findings mainly apply to Western religions (Christianity) and not to Eastern religions such as Buddhism and Hinduism.

The main findings of the linking of religion to the organizational financial behavior can be summarized as the following: Within the organizational field, there is a distinct trend towards US-based studies compared to research at the individual and institutional levels. However, organizational research is comparable to the other two levels when contrasting religion with non-religion and Protestantism with Catholicism. Moreover, it is surprising that there is an absence of specific European studies given the fact that the division of Christianity took place in Europe. In the case of the impact of religion on the organizational financial sphere, Tables 8 and 9 show a more balanced focus between the impact of religion versus non-religion and the impact of different religions. Overall, similar to the findings in the preceding section, it can be concluded that religion has a positive effect on firms, be it through financial benefits, e.g., lower interest rate costs for debt and cheaper equity financing, or through lower risk exposure. Furthermore, the overall results indicates that firms in Protestant areas tend to take fewer risks, take out fewer loans, and have easier access to equity financing.

Table 8: Overview of papers investigating the Influence of Religion on Organizational Economic Behavior I; Source: Authors' compilation

Author	Year	Country	Religion	Findings
Hilary and Hui	2009	USA (States)	Catholic, Protestant, Orthodox, other Christian religions, Judaism	Firms located in countries with higher levels of religiosity have lower risk exposure.
Grullon et al.	2010	USA (County)	Religion vs. Non-religion with a subdivision of Protestants	Companies in more religious areas are less likely to backdate options, be the target of security lawsuits, practice aggressive earnings management, and pay their managers less.
Shu et al.	2012	USA (County)	Religion vs. Non-religion and Catholic vs. Protestant	Local religious beliefs significantly influence the behavior of mutual funds, which means that these companies located in high-Catholic areas or low-Protestant areas will experience higher volatility in fund returns, be more aggressive in interim trading, and carry additional risk.
Dyreng et al.	2012	USA (States)	Religion vs. Non-religion and Catholic vs. Protestant	Higher levels of religious adherence are associated with a lower likelihood of financial restatement and less risk than financial statements.
McGuire et al.	2012	USA (States)	Religion vs. Non-religion	Their results suggest that firms headquartered in areas with strong religious and social norms generally have fewer problems with financial reporting irregularities.
El Ghoul et al.	2012	USA (States)	Catholic, Protestant, Mainline Protestant, Evangelical Protestant and Religion vs. Non-religion	Firms located in more religious countries enjoy cheaper equity financing.
Baxamusa and Jalal	2014	USA (States) - In addition, a small sample of other countries	Catholic vs. Protestant	They note that increasing a county's Protestant religiosity leads to lower leverage and less frequent debt issuances.
Pantzaalis and Ucar	2014	USA (States)	Christian religion vs. Non-religion	Local religious characteristics affect investors' response to corporate news.

Table 9: Overview of papers investigating the Influence of Religion on Organizational Economic Behavior II; Source: Authors' compilation

Autor	Year	Country	Religion	Findings
Jiang et al.	2015	China	Western religions vs. Eastern religions and Religion vs. Non-religion	Companies founded by religious entrepreneurs have lower leverage and invest less in fixed and intangible assets than companies established by non-religious entrepreneurs.
Kanagaretnam et al.	2015	81 Countries	Religion vs. Non-religion	Banks located in more religious countries exhibited lower levels of risk in their decision-making and did not encounter financial difficulties during the 2007-2009 financial crisis.
Adhikari and Agrawal	2016	USA (States)	Religion vs. Non-religion	Banks headquartered in more religious areas exhibit lower stock return volatility, lower tail risk, and lower idiosyncratic risk.
Chen et al.	2016	29 Countries	Religion vs. Non-religion	Greater religiosity is associated with lower interest rate spreads. This negative association is more pronounced in countries with weaker creditors' rights, suggesting that religious values play a significant role in constraining opportunistic behavior in a weaker legal environment.
He & Hu	2016	USA (States)	Religion vs. Non-religion	Corporate borrowers in countries with high religiosity are charged lower interest rates, have lower loan amounts and fewer loan covenants.
Cai and Shi	2017	USA (States)	Religion vs. Non-religion	Firms in more religious areas use less debt financing and receive better credit ratings.
Omer et al.	2018	USA	Religion vs. Non-religion	Audit companies in highly religious areas are more likely to issue going concern audit opinions, and are more skeptical of the effects of mitigating factors. Additionally, these authors found that these auditing companies issued going concern opinions out of risk aversion.
Diez-Esteban et al.	2018	37 Countries	Religion vs. Non-religion with subdivisions of Catholics, Protestants, and Islam	Companies from Protestant nations tend to take fewer risks than Catholic or Islamic ones. Furthermore, companies with high scores for power distance, masculinity, individualism, and long-term orientation increase risk taking, while high uncertainty avoidance moderates the companies risk-taking. In addition, they present evidence that companies with large institutional investors as shareholders are not as affected by these findings as individuals or family-owned businesses.

2.4.3.1 The Influence of Religion on Economic and Financial Behavior in Organizational Management

“The point is, ladies and gentleman, that greed -- for lack of a better word -- is good. Greed is right. Greed works. Greed clarifies, cuts through, and captures the essence of the evolutionary spirit. Greed, in all of its forms -- greed for life, for money, for love, knowledge -- has marked the upward surge of mankind. And greed -- you mark my words -- will not only save Teldar Paper, but that other malfunctioning corporation called the USA”

Gordan Gekko in Wall Street I (1987)

All kinds can make religion and the link to organizational management of different connections. Overall, it is a mix of ethical behavior, caused by specific (religious) values on the one hand and a particular economic, organizational performance, on the other hand.

The literature and the main organizational management theories, such as the Principal-Agent Theory, the UET, and the Institutional Theory, have shown the link between individuals (managers or employees) and their values and ethical beliefs in organizations. In 2018 the Holy See published a Paper about the Pope’s view on management, organizations, and their behavior. One of the statements was: “Selfishness, in the end, does not pay while it makes everyone pay a high price; hence, if we want the real well-being of humanity, “Money must serve, not rule!” For this reason, the competent and responsible agents have the duty to develop new forms of economy and of finance, with rules and regulations directed towards the enlargement of the common good and respect for human dignity along the lines indicated by social teachings of the church. [...] It is especially necessary to provide an ethical reflection on certain aspects of financial transactions [...]” (Ladaria, Morandi, Turkson, & Duffe, 2018, pp. 2-3).

This demand accompanies different study results which have been made during the last years. For example, in a qualitative study about the psychology of the superrich, Zitelmann (2017) has different interview partner who presents their “Christian attitude” as value for being calm after a significant loss (Zitelmann, 2017, p. 364). Another respondent talks about his religious values and how these influenced his way to become a multimillionaire (Zitelmann, 2017, p. 368). Most of his interviewed Managers share the thought that “Money must serve, not rule!”. Barrenstein et al. (2016) interviewed 35 CEOs and top managers (current and former) about their management skills, including their Christian (Protestant) values in their everyday work. The

study presents evidence that these Christian values seem to be very important including faith, trust, and social responsibility (Barrenstein, Huber, & Wachs, 2016). In almost every Interview, the consulted managers connect of their management values with some statements of the Bible. Some of the examples are:

1. "The world of the Bible, particularly the traditions of the Protestant ethic, is alien to any form of waste and luxury. Thrift and the calculated goal-oriented use of resources are the responsibility of the Christian. [...] Rationality and efficiency in dealing with resources are also required today in dealing with the natural conditions of life - out of charity, out of love for the next generation, and also out of economic insight." (Barrenstein, Huber, & Wachs, 2016, pp. 20-21).³¹
2. "We become the more selfish, the closer it gets to your wallet. So close that the Bible states the quarterly account of revelation for some, the reading of stock prices becomes daily devotion, and the wallet becomes the house altar. - Prof. Dr. Corinna Salander " (Barrenstein, Huber, & Wachs, 2016, p. 57)³²
3. "In that sense, is your Christian management a competitive advantage? Yes. What we're doing here is more like modern leadership concepts, as they are thought of in modern business schools, but without Christian vocabulary. "- Jeffrey Seeck" (Barrenstein, Huber, & Wachs, 2016, p. 70)³³

31 „Der Welt der Bibel und insbesondere den Traditionen der protestantischen Ethik ist jede Form von Verschwendung und Luxussucht fremd. Sparsamkeit und das kalkulierte zielorientierte Einsetzen von Ressourcen gehören zur Verantwortung des Christen. [...] Rationalität und Effizienz im Umgang mit Ressourcen sind heute auch im Umgang mit den natürlichen Lebensbedingungen geboten – aus Nächstenliebe, aus Liebe für die nächste Generation und auch aus ökonomischer Einsicht.“ (Barrenstein, Huber, & Wachs, 2016, pp. 20-21)

32 „Wir werden umso egoistischer, je näher es an den eigenen Geldbeutel geht. So nah, dass für manche der Kontoauszug zur Bibel, der Quartalsbericht zur Offenbarung, die Lektüre der Aktienkurse zur täglichen Andacht und das Portemonnaie zum Hausaltar wird. – Prof. Dr. Corinna Salander“ (Barrenstein, Huber, & Wachs, 2016, p. 57)

33 „Insofern ist Ihre christliche Unternehmensführung ein Wettbewerbsvorteil? Ja. Im Grunde entspricht das, was wir hier tun, modernen Leadership-Konzepten, wie sie auch in modernen Business-Schools vorgedacht werden – dort jedoch ohne christliche Vokabeln.“ – Jeffrey Seeck“ (Barrenstein, Huber, & Wachs, 2016, p. 70)

4. "With McKinsey, I was able to work for a company that has a strong and, indirectly, Christian-based set of rules." Peter F. Barrenstein (Barrenstein, Huber, & Wachs, 2016, p. 77)³⁴
5. "As a manager and evangelical Christian, this means for me, first and foremost, to act in a special responsibility based on Christian values. We stand together for something bigger, whole. [...] In the narrower economic sense, Protestant economics by no means pursues profit maximization for its own sake. It is more about profit with a sense of proportion, which serves the people and specific social purposes." – Thomas Katzenmayer (Barrenstein, Huber, & Wachs, 2016, p. 85).³⁵
6. "Good corporate governance puts human dignity before any profitability consideration." - Werner Michael Bahlsen" (Barrenstein, Huber, & Wachs, 2016, p. 268).³⁶

Li (2008) concept a whole summary of different managerial Implications, which follow Biblical principles:

34 „Mit McKinsey konnte ich bei einer Firma arbeiten, die ein starkes und indirekt auch christlich fundiertes Regelwerk hat.“ – Dr. Peter F. Barrenstein (Barrenstein, Huber, & Wachs, 2016, p. 77)

35 „Als Manager und evangelischer Christ heißt das für mich in erster Linie, an christlichen Werten orientiert in einer besonderen Verantwortung zu handeln. Wir stehen gemeinsam für etwas Größeres, Ganzes ein. [...] Im engeren ökonomischen Sinn verfolgt evangelisches Wirtschaften keineswegs Gewinnmaximierung um ihrer selbst willen. Es geht vielmehr um Profit mit Augenmaß, der den Menschen und bestimmten sozialen Zwecken dient.“ – Thomas Katzenmayer (Barrenstein, Huber, & Wachs, 2016, p. 85)

36 „Gute Unternehmensführung stellt die Würde des Menschen vor jede Rentabilitätsüberlegung.“ – Werner Michael Bahlsen“ (Barrenstein, Huber, & Wachs, 2016, p. 268)

Table 10: Biblical principles and the implications of their potential impact on managers' propensity for opportunism; Source: Li (2008, p. 776)

Biblical Principles ³⁷	Managerial Implications
<p>“The earth is the Lord’s, and everything in it, the work, and all who live in it.” (Psalm 24:1)</p>	<p>God as creator is the owner of everything (including business people). Executives and managers are only stewards of things that God has entrusted them. If authority over business resources is given to someone, it must not be used to gain advantage deceitfully.</p>
<p>“Use honest scales and honest weights [...]” (Leviticus 19:36) “Therefore, each of you must put off falsehood and speak truthfully to his neighbor [...]” (Ephesians 4:25)</p>	<p>The Christian value includes truth and honesty. This calls people to renounce deceit and do what is just, right and honest. Opportunistic behaviors such as lying, cheating, twisting information and evidence are among the ways that managers may attempt to gain advantage for their own benefit. Misrepresentation and deception infect open interaction between partner firms and destroy the trust necessary for continuous business relationship.</p>
<p>“You shall not covet your neighbor’s house [...]. Or anything that belongs to your neighbor” (Exodus 20:17) Jesus [...] said to them, “Watch out” Be on your guard against all kinds of greed; a man’s life does not consist in the abundance of his possessions.” (Luke 12:14-15) “Keep your lives free from the love of money [...]” (Hebrews 13:5)</p>	<p>The last one of the Ten Commandments cuts below behavior to touch inner motivations. The incentives for life, including the business parts of it, are not to be rooted in cravings or lust for what is not ours to have (Stackhouse, 1995). This commandment and the other two Bible verses from the New Testament (listed on the left column) specifically warn people against greed, which is the inner motivation of most opportunistic behaviors.</p>
<p>“This is what the Lord says: Do what is just and right [...]. Do no wrong or violence to the alien [...]” (Jeremiah 22:3) “The alien living with you must be treated as one of your native-born. Love him as yourself [...]” (Leviticus 19:34)</p>	<p>God calls his people to act justly, in the economic sphere of life as well as in other spheres. The Bible indicates that people should deal as equitably with the foreigner and the stranger as with the family member and the beloved neighbor. Opportunistic behavior toward one’s foreign business partner is especially discouraged according to the Bible.</p>
<p>“People who want to get rich fall into temptation and a trap and into many foolish and harmful desires that plunge men into ruin and destruction. For the love of money is a root of all kinds of evil. Some people, eager for money, have wandered the faith and pierced themselves with many griefs.” (1 Timothy 6:9-10)</p>	<p>This Biblical principle points out that people should not orient their lives toward the seeking of wealth, not mention seeking wealth by opportunistic behaviors. Nevertheless, profits are a likely and necessary result if in fact business people are doing a good job of meeting a need in society (Bakke, 1995).</p>

³⁷ All scripture from the New International Version of the Bible

2.4.3.2 The Influence of Religion on Economic and Financial Behavior in Organizational Investment

Another large research field within the influence of religion on Organizations is Responsible Investment. Responsible Investment (R.I.) in general connects ethical behavior and Investment. An investment- and research field, which is, even without the direct connection to religion, increasing rapidly in theory and practice nowadays (Micilotta, Eurosif, 2019). In 2016 the total amount in professionally managed and responsible investment strategies was \$22.89 trillion compared to \$5 trillion in 2009 (Micilotta, Woll, O'Connor, & Abbey, 2019).

However, religious organizations were pioneers in responsible Investment and invest till today large amounts. Their outset for private, organizational, and public investors, away from Church organization investing their own money, was during the 1960's in the US and Sweden, with Investment avoidance in armaments, alcohol, and gambling. For the "Aktiefond Sverige" in Sweden, different protestant churches were involved while setting up this public fund (Kreander, McPhail, & Molyneaux, 2004). The first US Ethic fund (Pax) was set up by "two pacifist ministers concerned over the Vietnam war endeavored to invest in a fund which excluded shares in companies producing armaments. They found no such fund exists. As a result, in 1971, they set up their own, aptly named Pax (Kreander, McPhail, & Molyneaux, 2004, p. 410).

Louche and Lydenberg (2010) have identified five development phases of Responsible Investment:

1. Root phase: mainly in the eighteenth century
2. Development phase: from the 1970s to the late 1980s
3. Transition phase: 1990s
4. Expansion phase: 2000s
5. Mainstreaming phase: 2010s

Today, this investment field has grown into a widely diverse one with various names, like: ethical investment, socially responsible investing, sustainable investing, triple-bottom-line investing, green investing, best-of-class investing, impact investing, responsible investing, and environmental, social, and governance investing (ESG) (Micilotta, Eurosif, 2019). Louche et al. (2012) present the following main characteristics of today's Responsible Investing:

1. investing is not perceived as being in contradiction with religious values,

2. religious values are important drivers,
3. there is a strong community around faith, consistent investing,
4. religious investors are pioneering impact investing, and
5. implementing faith-consistent investing is not without difficulties.

Besides, Sparkes and Cowton describe a “maturing of [...] Responsible Investment. [...] In particular, it has become an investment philosophy adopted by a growing proportion of large investment institutions” which has led from a margin investment strategy to a mainstream investment practice. (Sparkes & Cowton, 2004, p. 45). They detected a large proportion of significant pension funds, insurance companies, retail investment funds, and other investment companies who adopted this philosophy worldwide.

“On the question of what the “Christian” in Investment is, answered Franz: "I would like to quote Bishop Huber, who once said: Solidarity needs profitability. In this sense, successful investments for me are Christian in two ways: you have to do something before contributing to the community. And only well-run companies can provide people with space to earn a living and express their talents. Therefore, it is ethically positive to conduct a company well because it is an ideological and material value.“ (Barrenstein, Huber, & Wachs, 2016, pp. 93-94)³⁸ As the bible states: "A good tree cannot bring bad fruit and a rotten tree cannot bring good fruit" Matthew (7:18). In this sense, "Economic success is like a tree where many birds can find food, build nests and find shelter.“ – Daniel Hoster (Barrenstein, Huber, & Wachs, 2016, p. 120)³⁹. However, this economic success should underlie certain values and rules and should not include exclusion and inequality. As Pope Francisco stated in an Interview in (2018): “Let’s say “NO”, to an economy of exclusion and inequality where money rules instead of serving. This economy kills! This economy excludes. This economy destroys Mother Earth. [...] The way to escape consumerism, this corruption, this competitiveness, this being enslaved to money, is the concreteness of day-to-day work, is tangible reality!” (pp. 21-24).

38 „Was ist das Christliche an Investitionen? Ich will dazu gerne Bischof Huber zitieren, der einmal sagte: Solidarität braucht Profitabilität. In diesem Sinne sind erfolgreiche Investitionen für mich in zweifacher Hinsicht christlich: Man muss erst etwas erwirtschaften, bevor man einen Beitrag zum Gemeinwesen leisten kann. Und nur gut geführte Unternehmen bieten Menschen einen Raum, in dem sie ihren Lebensunterhalt verdienen und ihre Talente zum Ausdruck bringen können. Ein Unternehmen gut zu führen ist deshalb per se ethisch positiv zu bewerten, weil es ideelle und materielle Werte schafft. – Dr. Tilo Franz“ (Barrenstein, Huber, & Wachs, 2016, pp. 93-94)

39 „Wirtschaftlicher Erfolg ist wie ein Baum, in dem viele Vögel Nahrung finden, Nester bauen und Schutz finden können. – Daniel Hoster“ (Barrenstein, Huber, & Wachs, 2016, p. 120)

Corporate Social Responsibility (CSR) or sometimes just Corporate Responsibility is another field of firms' and organizations' ethical behavior. Corporate Social Responsibility (CSR), is defined by the European Commission as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (European Commission, 2001) and in the academic literature as "actions that appear to further some social good, beyond the interest of the firm and that which is required by law" (McWilliams & Siegel, 2001). Mc Williams and Siegel (2001) hypothesize in a theoretical model that a firm's CSR level will depend on its size, level of diversification, research and development, advertising, government sales, consumer income, labor market conditions, and stage in the industry life cycle. In their conclusion, they state an "ideal" level of CSR, which is indicated to the management by the neutral relationship between CSR and financial performance.

Corporate Social Responsibility is a broad research area, and only a part deals with the connection to religious norms and values. However, the main body of literature assumes that the individual level of religiousness impacts social responsibility's corporate outcome. For instance, Angelidis and Ibrahim (2004) find that there is a significant relationship between the degree of religiousness and attitudes toward CSR's economic and ethical components. They highlight the importance of high moral values in corporate social responsibility so recent scandals involving significant corporations such as ENRON, Arthur Andersen, WorldCom, Adelphia, and Xerox will not happen again since "the impact of these managerial shortcomings has been enormous." (Angelidis & Ibrahim, 2004, p. 119) U.S. Senator Byron Dorgan stated on February 12, 2002: "The bankruptcy of Enron is not a garden variety business failure. It is a bankruptcy framed by very serious questions about the behavior of officers, directors, and the accounting firm that audited the corporation's books. [...] It appears to me that this company developed a culture of corporate corruption that consistently challenged and bent the rules, and manipulated financial information to hide debts and booked profits that did not exist. [...] The integrity of our free-market economic system is seriously challenged by what went on here." (Conroy & Emerson, 2004, p. 384). Conroy and Emerson (2004) tested religiosity and ethical standards. They find evidence that religiosity and religious education influences good ethical behavior (Conroy & Emerson, 2004). Their study was driven by the Enron bankruptcy and the unethical behavior within this company.

Whereas Angelidis and Ibrahim concentrated on American Business students in their questionnaire, Brammer et al. (2007) investigates a large sample of over 17,000 individuals from 20 countries. Their findings indicate that “religious individuals do not prioritize the responsibilities of the firm differently, but do tend to hold broader conceptions of the social responsibilities of businesses than non-religious individuals. However, we show that this is neither true for all religious groups, nor for all areas of CSR.” (Brammer, Williams, & Zinkin, 2007, p. 229).

2.4.3.3 The Influence of Religion on Economic and Financial Behavior in Entrepreneurship

“We add [...] the relationship between religious ethic and one fundamental feature of capitalism and the market economy, i.e., entrepreneurship. We broadly define entrepreneurs to include all those individuals that risk on their own, self-organize their work schedule, often manage dependent employees and are residual claimants of the results of their ventures, in good and bad times. Hence, the entrepreneurs are captains of industry, business leaders in any economic sector but also professionals and small business owners.” - (Nunziata & Rocco, 2016, p. 190).

Nunziata and Rocco found in two studies that there is a difference in entrepreneurship between Catholics and Protestants in the same region. They find evidence that Protestantism increases the probability of being an entrepreneur by around 1.5% and 3.2% in Switzerland (Nunziata & Rocco, 2016). In another study, they tested the Holy Roman Empire⁴⁰ and found evidence that the possibility increases by around 5% (Nunziata & Rocco, 2018). Overall, they associate Protestantism with a significantly higher propensity to become an entrepreneur. Another study finds that Catholics support private ownership twice as much as Protestants and favor competition (Guiso, Sapienza, & Zingales, 2003).

Parboteeah et al. (2015), on the other hand, did not find evidence that the religious profile impacts individual entrepreneurial activity. However, they present that the country level of investments in knowledge conduces as a contingency factor. Furthermore, they find a connection between religion and investment in education (Parboteeah, Walter, & Block, 2015).

⁴⁰ The HRE includes Austria, Belgium, Czech Republic, Germany, France, Luxembourg, Poland, and Slovenia.

Audretsch et al. (2013) suggest that Christianity has no impact on self-employment. However, they tested their model in India, where there happens to be mainly people believing in Hinduism. Applying the institutional theory by North (1990) and the social dominance theory (Sidanius et al. (1992), Sidanius et al. (1994), and Sidanius and Felicia (1999)) they find that Hinduism has a restricting effect on self-employment. In addition to that, they find linkages between religion and social classes. This leads to further findings, which indicate that individuals who belong to a lower social class are less likely to be self-employed (Audretsch, Bönte, & Tamvada, 2013). Interestingly Jiang et al. (2015) find that mainly entrepreneurs with a connection to a Western religion apply values such as lower leverage and safer investments, but not the Eastern religions.

That religiosity has an essential role in family firms' succession intention was investigated by Shen and Su (2017). Family firm founders' religiosity and family firm's socioemotional wealth interactively strengthen management succession intention. The evidence is substantial for Buddhism, mainly influenced by using data from China (Shen & Su, 2017).

2.4.4 The Influence of Religion on Economic and Financial Behavior at the Institutional Level

The third level of the literature analysis examines how religion influences organizations' and nations' economic and financial characteristics. This level of analysis tries to shed light on the overhead perspective that is unrelated to the individual and organizational linkages with religion. Research at the institutional level links religion to institutional or country-specific features that affect and permeate all behavior, including that of people and organizations, like legal systems, state religions, creditors' rights, and so on.

In his 1998 paper, "Introduction to the Economics of Religion", Iannaccone wrote: "Yet despite this leisurely launch, dozens of economists (and several sociologists) have now picked up where Adam Smith (1776) and Corry Azzi and Ronald Ehrenberg (1975) left off. Armed with the tools of economic theory and a large body of data, they have written nearly 200 papers concerning issues that were previously confined to other social sciences—the determinants of religious belief and behavior and the social and economic impact of religion. If the study of religion does not yet warrant a JEL classification number, let alone the subfield status that it enjoys within every other social science, it nevertheless qualifies as a new territory within the

expanding domain of economics.” (Iannaccone, 1998, p. 1465). This shows the significance and influence of the discussion that took place in later years.

Iannaccone and colleagues started their research with the impact and consequences of religious market structures and the connection between the state and religion. Specifically, Iannaccone (1991) follows Adam Smith’s (1776) vision of religion and uses the “religion-market model” by Finke and Stark (1992). He discovered that “across Protestant nations, rates of church attendance and religious belief are substantially higher in highly competitive markets than in markets monopolized by established churches.” (Iannaccone, 1991, p. 5). Finke and Iannaccone (1993) identified a shift on the supply side of religious change and presented alternative emerging religious organizations, like colonial revivalists, Asian cult leaders, and contemporary televangelists, all proposing a change in the American religious marketplace.

More general tests were performed by Barro and McCleary in three different studies. They assumed that society’s religious beliefs were associated with economic growth (Barro and McCleary, 2003; Barro and McCleary, 2005; McCleary and Barro, 2006). In particular, Barro and McCleary (2005) found that having a state religion increases religious affiliation. This connection then strengthens religious beliefs. However, their dataset revealed that the number of state religions decreased in all religious groups in 1900, 1970, and 2000, with the exception of Islam as a state religion. Here the amount increased by 20% from 1970 to 2000. But a state religion does not affect GDP per capita. Interestingly, the number of Protestant state religions, with 10, compared to 22 Catholic, 8 Orthodox, and 29 Islamic, is relatively small (Barro & McCleary, 2005, p. 1339).

In another study, McCleary and Barro (2006) examined two significant religiosity theories: the secularization hypothesis and the religion-market model. The results of this study show that the presence of a state- religion tends to increase religiosity. However, religiosity loses its impact on economic development, measured by GDP per capita. Nevertheless, religiosity is positively related to education, especially among children. Their assumption that religious belief is associated with economic growth was only statistically significant for faith and not for belonging. Church attendance has a negative impact on economic growth (Barro & McCleary, 2003). This finding is supported by three studies from Great Britain, showing a significant drop in church attendance, from 50% in 1850 to about 8% in 1999 (Voas & Crockett, 2005). According to Davie (1990), fewer people adhere to established church practices but may still believe in and practice their faith’s underlying morals and values. Winter and Short (1993)

conducted 489 face-to-face interviews and observed that most people express firm religious beliefs without belonging to the Church of England. Overall, there is an apparent secularization in church attendance, religious belief has not changed. This effect increases with state religions. Grier (1997) specialized in Protestantism's connection with the economic development of 63 former Spanish, French, and British colonies. He found that former French and Spanish colonies, both of which carried on the Catholic tradition of their conquerors, performed significantly worse on average than the British colonies analyzed, which were primarily Protestant. Furthermore, the growth rate of Protestantism was significantly positively correlated with real GDP growth, which led to a higher income level per capita. A similar observation was made by Becker and Woessmann (2009), who compared the income of German Protestants with German Catholics. Finally, Arrunada (2010) tested Weber's model with the result that Protestantism positively influences capitalist economic development.

Even while the majority of studies point to an economic advantage, none have yet shown a link between religion or a particular religion and financial performance at the country level. Contrarily, Acemoglu et al. (2001) found that religion, in general, does not have any effect on the economy's performance. Exactly the opposite position is held by Cantoni (2015), who reviewed data from 272 cities between 1300 and 1900 and found no link between Protestantism and economic growth. Similarly, Cantoni et al. (2001) used a dataset from 1500 and 1700 and compared 90 northern European cities and 226 southern European cities to test the culture and religion-based economic growth model proposed by Weber. Their findings indicate that religion does not have an impact in the way Weber describes. They argue that Protestant Europe's financial success can be explained by an economic network and the establishment of cross-border companies by merchants. Therefore, they declare that Weber was mistaken and they reject his thesis.

Using county-level data from Prussia in the late nineteenth century, Becker and Woessmann (2009) presented an alternative theory to Weber's hypothesis. They contend that because Protestants study the Bible, they are more educated and economically prosperous. Their approach is based on Martin Luther's advocacy of universal education for all Christians, who explicitly endorsed the idea. Luther believed that education was the cornerstone of society and that every child, boy or girl, should be taught to read the Bible on their own (Becker & Woessmann, 2009). In fact, Luther inadvertently boosted Protestants' economy by encouraging more learning among them, which he did in a purely religious manner. In his pamphlet from

1524, “To the Councilmen of All Cities in Germany That They Establish and Maintain Christian Schools”, he requested the Protestant rulers to build and maintain schools. In addition, in his “Sermon on Keeping Children in School” from 1530, he demanded that parents be responsible for their children’s education and ensure that they attend school.

Reformation was carried out by Huldrych Zwingli in Zurich in 1519 much like Luther’s reforms in Germany. Zwingli adapted and reworked his original concept of Protestantism in order to establish a Reformed Protestantism. This adapted Protestantism was first exploited in Western Switzerland. Barsten and Betz (2013) explored its effect on preferences for leisure, redistribution, and economic intervention in relation to Catholicism in some areas of Switzerland. They found “that Reformed Protestantism reduces referenda voting for more leisure by 14, redistribution by 5, and government intervention by 7 percentage points. These preferences translate into higher per capita income as well as greater income inequality” (Barsten & Betz, 2013, p. 67). Overall, all three ideas, Luther’s, Zwingli’s, and Weber’s, lead to a Protestant economic lead in most studies.

Another research focus has been the impact of religion on the legal system and, more specifically, on the degree and development of creditors’ rights. Stulz and Williamson (2003) point out that there seems to be a connection between trust in the legal system and creditors’ rights. Specifically, they found that Catholic countries had significantly weaker creditors’ rights than other countries. Furthermore, they showed that culture and religion are related to the enforcement of rights, with Catholic, mainly Spanish-speaking countries showing weaker enforcement of rights. These findings point to a secure connection between state and religion, which was also researched by Cosgel and Miceli (2009) and by Cosgel et al. (2016), who obtained similar results. Finally, from a theoretical perspective, Dehejia and Dehejia (1993) argue that there has been a close linkage between religious thoughts and economic activity in India during the past 2,000 years.

Table 11 & 12 summarize the latest research on the impact of religion on institutions and countries’ economic and financial characteristics, revealing some trends. First, the research emphasis is on religion versus non-religion. Only a few studies have been conducted on the differences between Catholicism and Protestantism. Second, and in contrast to the individual and organizational levels of analysis, most studies focus on various countries and not only on the United States, or Western countries. Third, while research contrasting religion and non-religion has presented diverse and contradictory findings, research comparing Protestant

countries with Catholic countries points in the direction that the level of work ethics, creditors' rights, and income (GDP) (and thus economic development) is higher in predominantly Protestant nations than in predominantly Catholic ones.

Table 11: Overview of papers investigating the Influence of Religion on Institutional Behavior I; Source: Authors' compilation

Author	Year	Country	Religion	Findings
Iannaccone	1991	17 developed Western Nations	Protestant vs. Other religions	Across Protestant nations, church attendance and religious belief rates are substantially higher in highly competitive markets than in markets monopolized by established churches.
Finke and Iannaccone	1993	USA	Religion in general	They identify a on the supply side of religious change and alternative emerging religious organizations, like colonial revivalists, Asian cult leaders, and contemporary televangelists, all proposing a change in the American religious market.
Dehejia and Dehejia	1993	India	Religion in general	Their findings suggest that there was, is, and will be a strong interrelationship between religious thought and economic activity in India.
Grier	1997	63 former Spanish, French, and British Colonies	Protestant vs. Catholic	The Protestant colonies, on average, achieved better GDP growth and higher per capita income than the Spanish and French colonies, which were mainly Catholic.
Iannaccone	1998	17 developed Western Nations	Religion in general	He contributes theoretical and analytical work to the field of economics of religion and notes that the research area is becoming more prominent.
Acemoglu et al.	2001	64 Countries (former Colonies)	Religion in general	Religion does not affect economic performance.
Cantoni et al.	2001	90 Cities in Northern Europe	Protestantism / Religion in general	The authors conclude that religion/Protestantism has no influence on the economic success of the cities. They reject Weber's thesis and state that "Weber was wrong".
Stulz and Williamson	2003	49 Countries from Asia, Europe, North America, South America, Africa, Australia	Catholic, Protestant, Islam, Hindu, Buddhist, Greek Orthodox, Judaism, local beliefs	Catholic countries protect creditors less well than Protestant countries.
Barro and McCleary	2003	59 Countries	Religion in general	Economic growth is positively correlated with religious belief but negatively correlated with church attendance.

Table 12: Overview of papers investigating the Influence of Religion on Institutional Behavior II; Source: Authors' compilation

Autor	Year	Country	Religion	Findings
Barro and McCleary	2005	188 Countries	State religion vs. Non-state religion	Their findings show a shift in state- religions, driven mainly by regime changes or individual movements, depending on whether the state- religion is introduced or removed from the constitution.
McCleary and Barro	2006	68 Countries	Religion in general	They contend that, in accordance with the secularization view, general economic progress tends to reduce religiosity while the presence of a state religion tends to boost it, and that education is favorably correlated with religiosity while urbanization is negatively correlated.
Becker and Woessmann	2009	Germany	Protestant vs. Catholic	German Protestants tend to have higher incomes compared to German Catholics. However, the reason for this should be through better and higher education, as Luther suggested "reading the bible by yourself" and a better work ethic.
Cosgel and Miceli	2009	166 Countries	Religion in general	"Religious goods benefit the state in two ways: first, they provide utility to citizens, thus allowing the state to extract more taxes before running up against citizens' reservation utility (the point at which they would revolt), and second, they potentially provide legitimacy to the state, thereby lowering the costs of tax collection."
Arrunada	2010	31 Countries	Protestants vs. Catholics	Protestants work more and have a more effective work ethic, which leads to greater economic development.
Barsten and Betz	2013	Countries in Switzerland	Reformed Catholics vs. Protestants	"Reformed Protestantism reduces referenda voting for more leisure by 14, redistribution by 5, and government intervention by 7 percentage points. These preferences translate into higher per capita income as well as greater income inequality."
Cantoni	2015	272 Cities	Protestants / Religion in general	They checked data from various cities between 1300 and 1900 and did not find any connection between Protestantism and economic growth.
Cosgel et al.	2016	191 territories and countries since 1000	Religion in general	They offer a systematic analysis of the development of state and religion over time. They found that both affect the legitimacy of political leaders and regimes.

2.4.5 Conclusion

Reaching back to Martin Luther (1524), Adam Smith (1776), and Max Weber (1905), it seems that the potential influence of religion on finance was recognized early on and was written down in a number of literary works before reaching modern research. Nowadays, “the study of religion has enjoyed salience and legitimacy, [next to economics], within sociology, psychology, anthropology, history, and political science” (Iannaccone, 1998, p. 1465).

The last chapter helps to understand and clarify the influence of religion at different significant levels of the financial sphere, specifically at the individual, organizational, and institutional levels. Thus, this review seems to be a first step toward understanding this influence, its positive and negative relationships, as well as its specificities when comparing religion with non-religion or the differences between religions.

With respect to the impact of religion versus non-religion, the analysis allows to conclude that religion positively influences individuals, organizations, and institutions through its effect on key variables such as well-being, social connection, criminality, ethical judgment, consumer or business attitudes, and economic decisions (Iannaccone, 1998).

A general question regarding *religious influence at the individual level* has been: “Is religion good for you?” The presented research suggests that it can be answered with a definite “Yes” (Gruber, 2005, p. 1). Furthermore, having a religious conviction is generally associated with higher levels of education and income, lower welfare receipt level, higher credit scores, more generous financial responsibility, as well as a better work attitude (Benjamin et al., 2016). But while the question has been analyzed in terms of religion versus non-religion, researchers have not addressed the question of whether all religions are beneficial to their adherents. With this in mind, when looking at the behavior of people from the two main Christian faiths (Catholicism and Protestantism), the core issue here has been to find out where their adherents tend to invest and how likely they are to engage in more or less risky behavior, e.g., gambling. Protestants invest more in the stock market, while Catholics are more risk-averse when making investment decisions, although they tend to gamble and use stock options (Kumar et al., 2011). On the other hand, the research field of religious influence at the organizational level has examined this influence on the company’s location (headquarter effect), financial reporting, investment risk, management/TMT, and capital structure. While most studies used data from the United States, some others included worldwide datasets, with similar results. In conclusion, most researchers state that “location matters.” Organizations located in more religious areas have lower risk exposures and no financial difficulties and obtain lower loan interest rates

(Hilary & Hui, 2009). In terms of the influence of the two religions considered, firms in areas with more Protestants tend to have higher equity amounts and take out fewer loans. Comparatively, companies located in more Catholic regions typically have larger risk exposure and lower equity portions (Dryeng et al., 2012).

Third, regarding *the institutional level*, it may be concluded that religion affects institutions in three different ways. According to Stulz and Williamson (2003), religion, as “a proxy for culture,” influences a country or society’s culture in specific ways. Through direct or indirect channels, state religion affects legal and political systems (Iannaccone, 1998). Furthermore, general Christian religious belief is associated with economic growth (Barro & McCleary, 2003), Catholic countries showing significantly weaker economic development than Protestant ones (Stulz & Williamson, 2003). Moreover, Catholic nations have significantly weaker creditors’ rights, and Protestant ones have more developed equity markets.

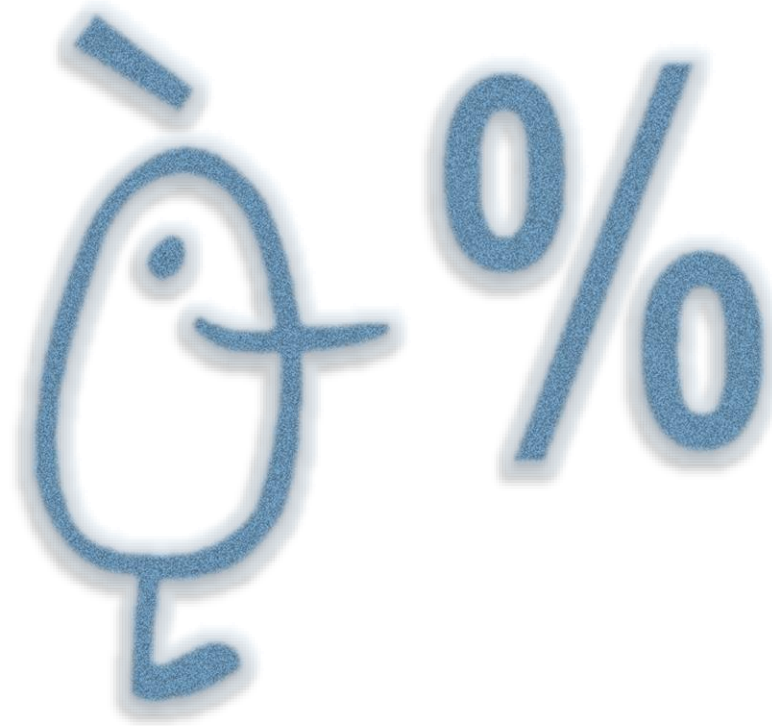
This chapter discovered that both religion in general and specific religious beliefs have a significant impact on finance and economic behavior and that there is a strong connection between them. The relevance of the two research areas —religion and finance— as well as the key methodological issues differ among the three levels of the analysis, individual, organizational, and institutional. In this respect, the last chapter highlights some conclusions.

At the individual level of analysis, religion has been mainly compared with no religion, with few studies analyzing the differential impact of specific beliefs. And in terms of methodology, research at this level is primarily focused on the United States.

Regarding the organizational level, the number of studies contrasting religion with non-religion is similar to those comparing the two major Christian faiths. With regard to the sample context, it seems that data availability drives the research designs, with the majority of studies dealing with the United States. Moreover, organization-level research appears to focus only on large firms, with an emphasis on banks and only one study dealing with family business. Other types of firms, such as SMEs, are missing as a research field among these studies. The UET highlights that the values and beliefs of CEOs and TMTs play a significant role in SMEs’ actions and behaviors and therefore as a result it shows that more research is necessary to fully understand this relationship, which could lead to a fruitful area of study.

At the institutional level, research conducted worldwide focuses primarily on how religion and non-religion affect financial issues in the national context. However, even though Europe was the birthplace of the division of Christianity, at this level of analysis too, there are no completely

European studies in the literature today. Moreover, most studies use official secondary data sources of religious affiliation and do not perform qualitative interview analyses of individuals' actual beliefs. The analyzed studies have some methodological shortcomings in this respect. For example, it seems surprising that the datasets were mostly analyzed with OLS regressions and no other methods like multilevel regressions, as these may be more accurate. Notwithstanding the latter, multilevel modelling is missing from this literature. Last but not least, there appears to be no connection between the various levels and their joint impact, for example, the influence of individuals on organizations or institutions.



CHAPTER 3

MODEL AND HYPOTHESIS DEVELOPMENT OF CULTURE AND RELIGION ON THE CAPITAL STRUCTURE OF SMES

3 MODEL AND HYPOTHESIS DEVELOPMENT OF CULTURE AND RELIGION ON THE CAPITAL STRUCTURE OF SMEs

The previous chapter was divided into four parts to construct a solid surrounding of theories and models for developing the present research model and the concluding hypothesis, which will be the content of this current chapter three. This chapter will be divided into two main parts.

First, the model will be developed, and will include the theories and influences of the theoretical part. In detail, the structure is as following: Firstly, the main findings from the finance part and the influences of the capital structure theories will be resumed and graphically developed. Secondly, the strategy management part's main findings will be briefly repeated and the theoretical approaches of this section will be added to the graphical model. Thirdly, the cultural model – using the values of Hofstede (2001) – will be added to the model. Fourthly and lastly, the religious results will be enclosed. Overall, this will lead to the underlying model of the present research.

Second, the underlying model will lead to the development of the central hypothesis. These hypotheses are divided into three parts. Firstly, the influence of culture on the capital structure, followed by, secondly, the impact of religion on the capital structure. Last, but not least, the effect of culture and religion on the firm's risk-taking.

3.1 Development of the Model

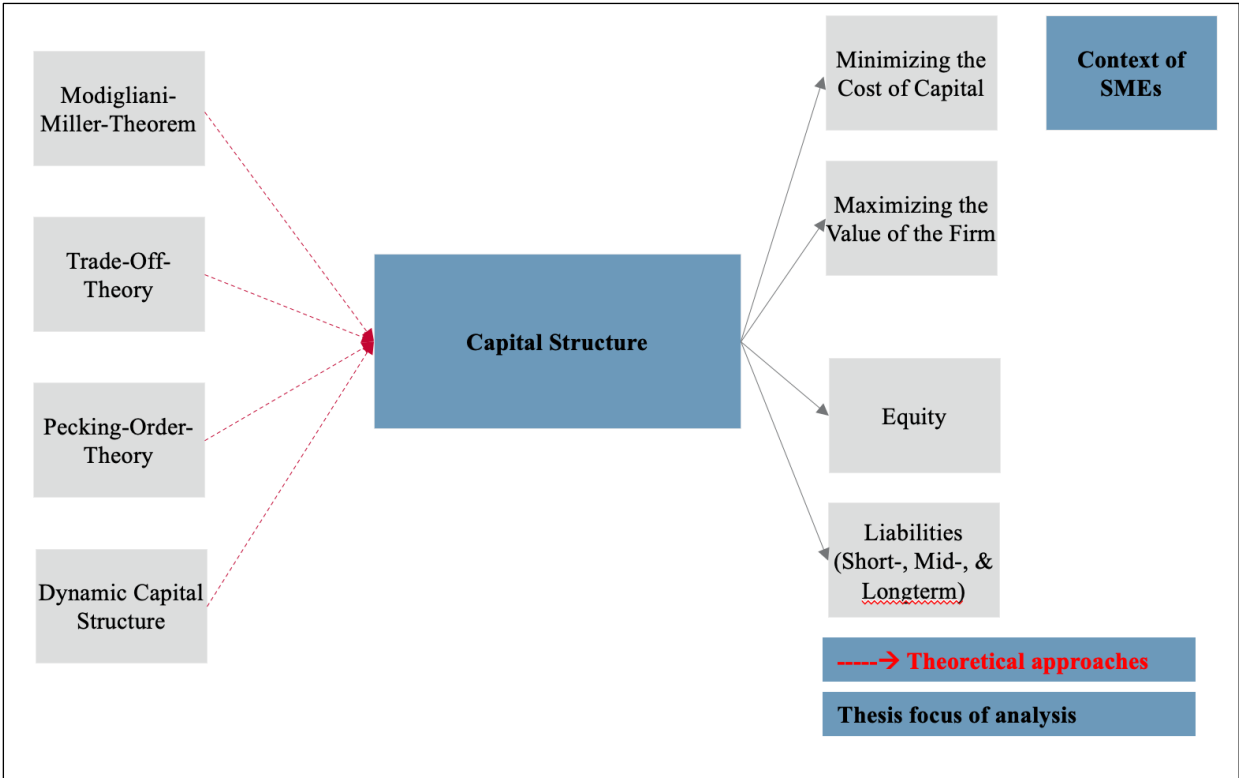
3.1.1 Capital Structure

The first part in the last chapter (2.1) has shown the most important capital structure theories. After the historical start of dealing with the optimum capital structure by Modigliani and Miller (1958), and their capital structure irrelevance principle, which laid the foundation for further research on the optimal capital structure, the following and most famous theories are the Trade-Off-Theory by Kraus and Litzenberger (1973), the Pecking-Order-Theory by Myers and Majluf (1984), and the latest dynamic approaches, for example, the Open-Window-Theory or the Market-Timing-Theory by Baker and Wurgler (2002). While the Capital Structure irrelevance principle assumes a perfect market, without taxes, without costs for information and

transactions, and no risk and expenses for financial distress, the following capital structure theories tried to include these market imperfections, such as taxes, transaction costs, costs for financial distress, and unevenly distributed information. Even though there is no perfect or partly perfect market, all theories are still valued today, in research, as well as in finance books (Perridon, Steiner, & Rathgeber, 2017). Moreover, the literature has also shown in empirical tests that these models were mainly tested for MNE (Hermanns, 2006).

The following figure presents all four theoretical approaches on the capital structure as well as the identification of measurements, on the one hand as the maximizing value of the firm and minimizing the cost of capital as an outcome of the “perfect” capital structure, and on the other hand as the differentiation between equity and debt, including the organizational context of SMEs.

Figure 8: Model with the theoretical influences on Capital Structure; Source: Authors’ compilation



However, it can be held that till today and despite an over sixty-year-old research field, there has not been a final, universal explanatory model for the capital structure of a company, and each of these theories has certain limitations. The fact that no two companies are the same, and the fact that, after many years of discussion, that a large number of complex, partially,

observable and partly unobservable factors influence the capital structure, has led to the understanding that the future will not arise a general explanation of the capital structure valid theory (Hermanns, 2006). The financial scientist Myers concluded after decades of dealing with this topic: “There is no universal theory of the debt-equity choice and no reason to expect one.” (Myers, 2001, p. 81). Consequently, the present research model is extended in the next section.

3.1.2 Strategy Management

The second part in the last chapter (2.2) has shown the most critical strategy management theories on the influence of individuals, such as CEO’s or TMTs, on organizations, as well as the effect of institutions on individuals and organizations.

As defined, the classic capital structure theories only view the organization as itself. However, the CEO or TMT is usually the one who is choosing the capital structure and has an exact idea about the capital structure in the company (Spiecker-Lampe, 2018), and does not play an essential role in all of the previously mentioned capital structure theories. Therefore, the second part of the last chapter revied firstly, the Agency Theory by Jensen and Meckling (1976), secondly the UET by Hambrick and Mason (1984), and thirdly the Institutional-Economics Theory by North (1990).

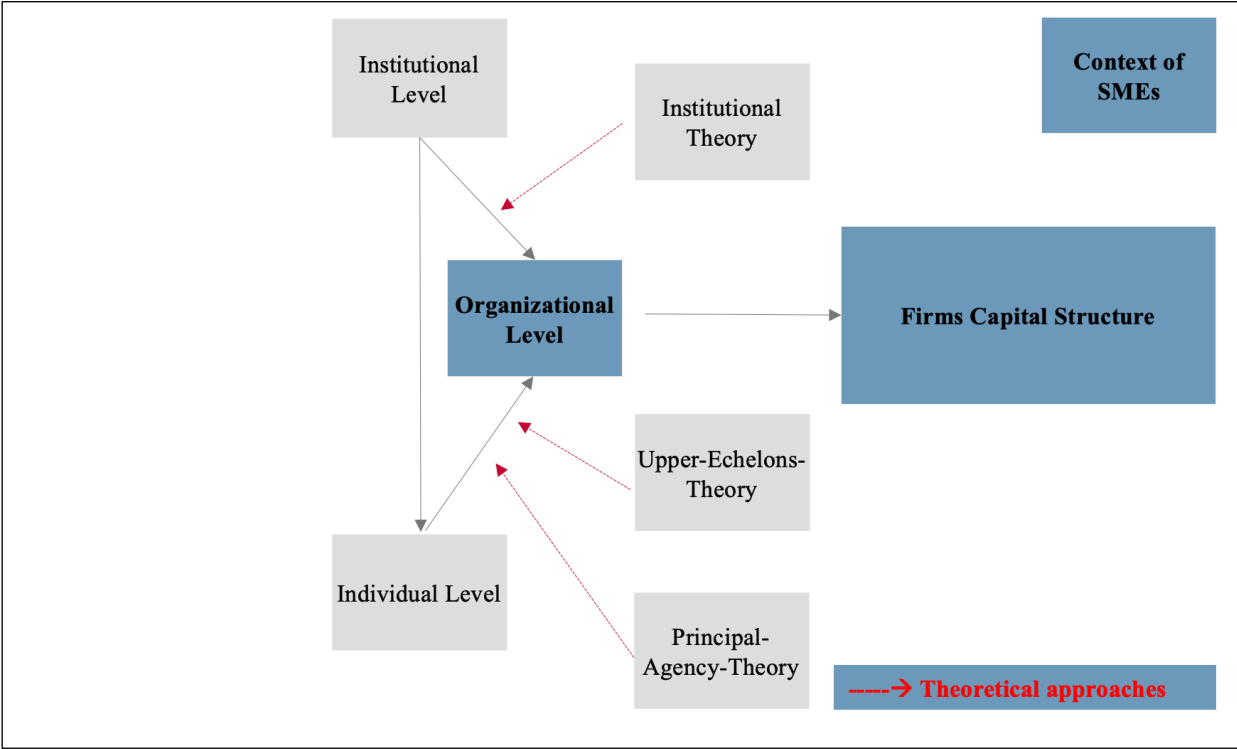
The Agency Theory by Jensen and Meckling (1976), which focuses on the conflicts between owners and managers and the information asymmetries, expanded the capital structure question to a question of ownership and management. So, under the Agency Theory, there seems to be a strong influence of the firm’s manager. This influence is also captured in the UET by Hambrick and Mason (1984), which states a similar view. The CEO/Top Manager influences the organization, its actions, and behaviors in a certain way. This approach deals, for example, among six others, with the socio-economic backgrounds as a significant connection between the CEO’s decision and the firm’s strategy. Furthermore, many researchers have shown that this influence is even more powerful when dealing with small local firms (Dolz, Iborra, & Safon, 2019).

However, as Nielsen (2010) found evidence, most researchers (80%) used the UET in connection with other theories, and even in an increasingly multidisciplinary way. Nielsen and Nielsen (2013), for example, connect the Institutional-Economics Theory from North (1990) with the UET to show the secure connection between the individual, organizational, and

institutional level. The institutional approach combines environmental and organizational structures. Both theories display the vital relationship between the institutional, corporate, and personal level. The Institutional Theory proposals are similar to the UET, even more, significant for Small and Medium Size Enterprises (Berthod, 2016).

The following figure presents the research model of the capital structure as center of the analysis focus, connected with the organizational research level and its influences from the institutional and individual level. The three theories are the theoretical approach to the forces on the organizational level and its explanation. Similar to the first figure, the context stays on SME's.

Figure 9: Model with the influence of the Organizational Level on Capital Structure and the underlying Strategy Management Theory's; Source: Authors' compilation



SMEs are an essential part of a local economy, and, therefore, they are connected with local customers, suppliers, financiers, and stakeholders in general. So, their employees, including the CEO and Top Manager, are usually deeply connected in the community, including all the privileges and obligations. Therefore, their individual values - such as sincerity, modesty, honesty, diligence, conscientiousness, and reliability - are influenced by institutional values. Furthermore, these values seem to have an essential stake for risk aversion and ethical behavior. Meyer and Rowan (1977) state that social processes, obligations, or actualities that come to

take a rule-like status in social thought or action influence individuals, and Scott (2017) adds that symbolic and behavioral systems contain representational, constitutional, and normative rules, together with regulatory mechanisms that define a universal meaning system and give rise to distinctive actors (individuals) and their action routines. In that sense, culture and religion have an influence on all three levels and will therefore be displayed in the next section.

3.1.3 Culture

The third part in the last chapter (2.3) has shown the most important cultural models, which appear nowadays. As Reimer (2005) states, these models can be divided into historical and modern theories. The two historical culture models, from Kluckhohn and Strodtbeck (1961) and Hall and Hall (1990), are based on theoretical approaches and rest upon different literature researches and, whereas this literature mainly came from anthropologists and ethnologists.

The modern theories from Trompenaars (2005), Schwartz (1999), GLOBE (Global Leadership & Organizational Behavior Effectiveness) Foundation (2018), World Values Survey (2018), and Hofstede (2001) were based on extensive surveys.⁴¹ The only one who used the data of other surveys was Erin Meyer (2014) for her culture map model. Nevertheless, Hofstede, for example, updated his culture model and values with the data and results of the World Values Survey in 2012 (Minkov & Hofstede, 2012).

Nowadays, the two most cited cultural models are from Shalom Schwartz (1999), with over 142.595 citations, and Geert Hofstede (2001), with over 227.726 citations.⁴²

Therefore, the present study uses the culture model and his classifications from Hofstede (2001). Hofstede's six essential characteristics are power distance, uncertainty avoidance, collectivism versus individualism, femininity versus masculinity, long-term orientation, and indulgence vs. restraint. These cultural variables have their comparative elements from other cultural models⁴³.

The latest literature presents mainly three cultural variables from Hofstede, and variables with similar meaning from the other theories, that seem to have an important influence on financial

⁴¹ These Theories will be further treated in chapter 2.3

⁴²On Google Scholar on the 12.01.2023

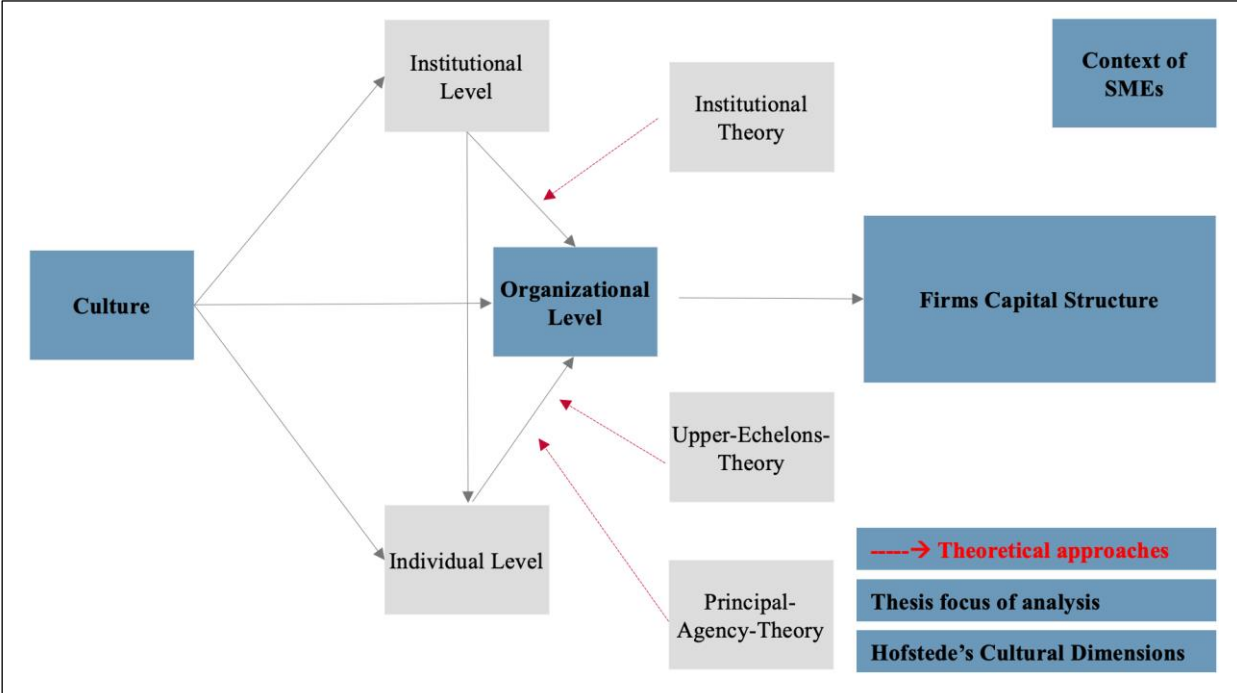
⁴³ Compare Table 6: Summary and comparison of the cultural dimensions; Source: Authors' compilation based and further developed on Reimer (2005)

decision making in general and more closely on the capital structure of a firm. Tested together, they do not show any statistically significant correlation, which implies that each variable captures a different dimension of national culture (Mourouzidou-Damtsa, Milidonis, & Stathopoulos, 2019). Individualism pertains to societies with loose ties between individuals, in contrast to collectivism, which belongs to cultures where people look after themselves, have healthy relationships, and behave cohesively (Haq, Hu, Faff, & Pathan, 2018). Mourouzidou-Damtsa et al. (2019) present with their results a positive association between individualism and bank risk-taking. Haq et al. (2018) find that cultures with high individualism hold more leverage. Uncertainty-avoidance measures to which degree individuals feel comfortable with ambiguity as a member of society (Hofstede, 1984). Commonly scientific research has shown that bank-risk-taking is negatively related to a high uncertainty-avoidance (Ashraf, Zheng, & Arshad, 2016). Long-term orientation, on the contrary, is mainly based on the “Confucian thinking”, which implies to preferably have long-term success, including goals and thrift (Hofstede, 2001). In general, firms in countries with high long-term orientation tend to have less leverage (Wang & Esqueda, 2014).

Moreover, there is another strong influence on the culture itself and, therefore, on the other mentioned theories. “As Finkelstein and Hambrick note, most senior executives are white, male, and Protestant; one can only imagine what psychological processes would be attributed to race, gender, and religion by demography theorists were there more variance on these dimensions in that population.” (Reger, 1997, p. 804).

The following figure presents the research model of the capital structure as the center of the analysis focus, connected with the organizational research level and its influences from the institutional and individual level. The three theories (Institutional Theory, Principal Agency Theory, and UET) are the theoretical approach to the influences on the organizational level and its explanation. In addition, culture takes over an essential role in the influence on the individual, organizational, and institutional level. Similar to the first two figures, the context stays on SME’s.

Figure 10: Model with the influence of Culture on the Organizational Level on Capital Structure and the underlying Strategy Management Theory's; Source: Authors' compilation



3.1.4 Religion

The fourth part in the last chapter (2.4) has shown that religion has a significant direct or indirect impact and influences individuals, organizations, and institutions in various ways.

Firstly, and as Terpstra and Kenneth state: “Certainly, religion is a mainspring of Culture. In any Culture, some references to an unprovable order of reality (divinity, historical dialectic, nationalism) justify patterns of authority and patterns of equal or unequal exchange among the members of society. Educational systems, political organizations, and social relations, such as the role of women, are all significantly affected by a society’s religion. Religion also has an impact on the practical level of the business firm.” (Terpstra & Kenneth, 1991, p. 72).

Stulz and Williamson (2003) declare that: “Culture can affect finance through at least three channels. First, the values that are predominant in a country depend on its Culture. For example, charging interest can be a sin in one religion but not in another. Second, Culture affects institutions. For instance, the legal system is influenced by cultural values. Third, Culture affects how resources are allocated in an economy. Religions that encourage spending on

churches or guns takes resources away from investment in production.” (Stulz & Williamson, 2003, p. 313). By mentioning religion as “a common proxy for Culture”, Stulz and Williamson (2003, p. 315) are following La Porta et al. (1999) who connected culture, law, and religion in their studies.

Secondly, and detached from the general cultural dimensions and values, religion seems to influence individual, organizational, and institutional levels and its connected various decision makings. The focus is religion, however, and due to the fact that the research area is in Pan Europe, the predominant religion is Christianity and then further divided into on the other hand Catholicism and on the other hand Protestantism.

Concerning the influence of religion on the individual level, Gruber (2005), asked the question about Christian religions: “Is Religion Good for you?” and answered with a definite “Yes” (Gruber, 2005, p. 1). His results indicate that Christian religious participation is associated with higher education and income levels, and lower welfare levels. Hess (2012) shows the impact of religiosity on personal financial decision making, and Renneboog and Spaenjers (2012) analyze the difference in individual economic decisions and find a difference in risk averseness and financial investment on the stock market between Catholics and Protestants. Benjamin et al. (2016) present, similar to Iannaccone (1998), that Catholics are more risk-averse in financial decisions than protestants.

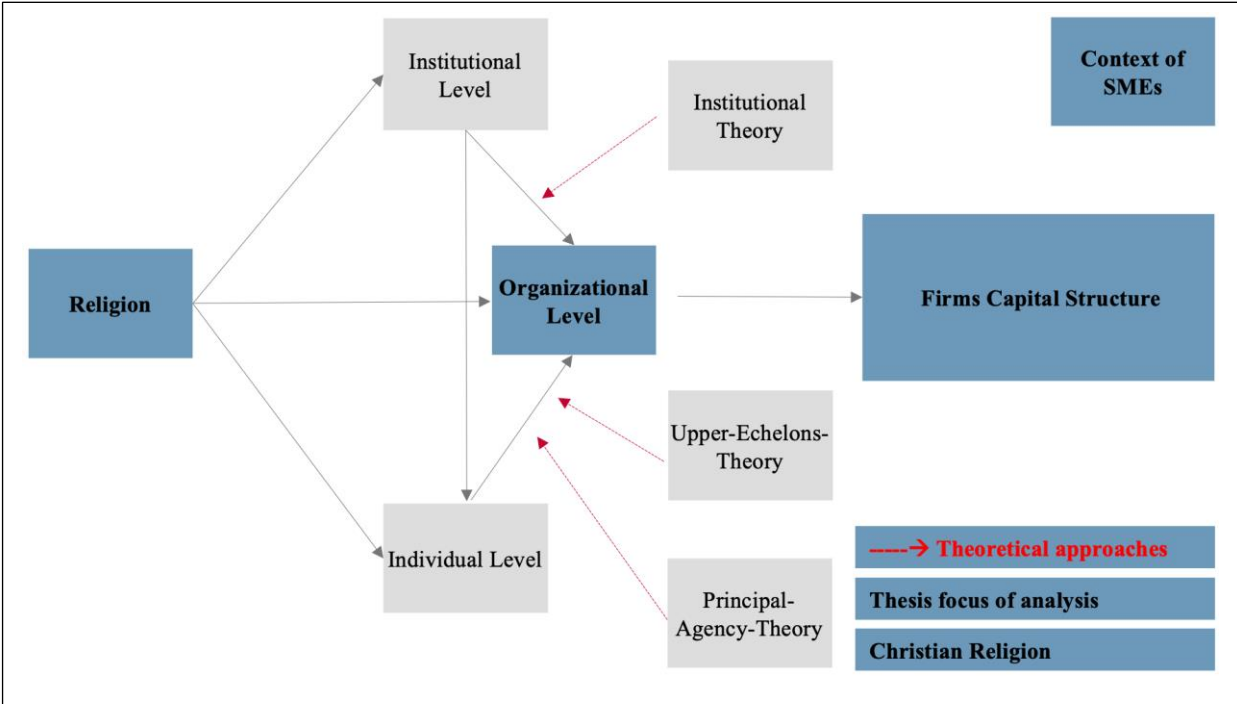
Concerning the influence of religion on the organizational level, He and Hu (2016) find evidence that bank loan terms differ for companies in areas with a different level of religiosity. Values such as risk aversion, ethical behavior, and honesty play an essential role for borrowers and lenders. These values are connected to religiosity, which assumes that they will be charged less interest. Cai and Shi (2017) document that firms in less religious areas have higher debt financing and a worse credit rating than companies in more religious areas. These findings go along with another study about bank risk-taking. Here, the study presents evidence that banks in more religious areas have lower risk and hold safer assets, which leads to a better rating (Adhikari & Agrawal, Does local religiosity matter for bank risk-taking?, 2016).

The influence of religion on the institutional level was identified, for example, and among others, by Barro and McCleary in three different studies. They assumed that the religious belief of society is associated with economic growth (Barro and McCleary (2003) and Barro and McCleary (2005) and Barro and McCleary (2006)). Stulz and Williamson (2003) indicate a connection between trust in the legal system and creditor rights, with the result that Catholic

countries have significantly weaker creditor rights than other countries. Iannaccone (1991), follow Adam Smith’s (1776) vision of the religion, and use the “religion-market-model” by Finke and Stark (1992), and find that “across Protestant nations, rates of church attendance and religious belief are substantially higher in highly competitive markets than in markets monopolized by established churches.” (Iannaccone, 1991, p. 5).

The following figure presents the research model of the capital structure as the center of the analysis focus, connected with the organizational research level and its influences from the institutional and individual level. The three theories (Principal Agency Theory, UET, and Institutional Theory) are the theoretical approach to the influences on the organizational level and its explanation. Figure 11 includes the influence of religion, which takes over an essential role in the influence on the individual, organizational, and institutional

Figure 11: Model with the influence of Religion on the Organizational Level on Capital Structure and the underlying Strategy Management Theory’s; Source: Authors’ compilation



3.2 Hypotheses

After the last part has presented the development of the research model, this part will lead to this present study's hypotheses.

Firstly, the hypotheses in connection with cultural values and its influence on the capital structure will be developed. Secondly, the hypotheses in connection with religious affiliation and its influence on the capital structure will be developed. Thirdly, further hypotheses will be developed, which present the relationship between cultural and religious values and the firms risk-taking. In the end, Table 19 and Table 20 will present an overview of all the hypotheses.

3.2.1 The Impact of Culture on the Capital Structure of SMEs

The following part will deal with the effect of culture on organizations. Similar to the influence of religion on individuals, organizations, and institutions, culture influences organizations through these three channels. Firstly, on the firm directly. Secondly, through the institutional level and the influence from the institution on the organization (Institutional Theory by North (1992))⁴⁴. Furthermore, the institutional level influences the individual level as well (Crossan, Lane, & White, 1999), which leads to, thirdly, the impact of the individual level on organizations (UET by Hambrick and Mason (1984))⁴⁵. The literature review in the previous part has presented the different culture models.⁴⁶ In the following part, the statements are either validated on culture as general or the cultural model of Hofstede.

On the institutional level, Jordaan et al. (2016) find that national wealth favors a significant development in stock markets, and therefore equity financing is increasing. Furthermore, they connect legal, political, and democratic institutions to promote of a developed stock market (Jordaan, Dima, & Golet, 2016). Stone et al. (2014) argue that the presence and intensity of an equity culture for companies within Europe has external institutional factors and internal managerial ones. This approach concludes that institutional and cultural values play a significant role in the change of equity and the organizational and individual preference within

⁴⁴ 2.2.4 Institutional Theory

⁴⁵ 2.2.3 Upper Echelons Theory

⁴⁶ 2.3.3 Modern Definition of Culture and their Theories

the firm (Stone, Filippaios, & Stoian, 2014). Karolyi (2016) describes in “The gravity of culture for finance” that cultural distance explains foreign bias in international portfolio holdings.

Next to culture in general, individual cultural dimensions are also linked to certain values. More specifically, Gaganis et al. (2019) find evidence that culture matters in SME’s profitability. In a large study with around 40.000 European firms from 25 EU countries, their results show that national culture plays an essential role in the terms and conditions of getting credit and enhancing profitability. In specific, individualism, masculinity, and long-term orientation positively impact the firm’s profitability, whereas power distance and uncertainty avoidance have the opposite effect. Chui et al. (2016) investigate how culture affects the cost of debt within companies using the cultural dimensions of Schwartz (1994). Using data from 33 countries, they find evidence that embeddedness and mastery have a strong negative relation to debt cost. Furthermore, they find that embeddedness is negative and mastery is positively related to bankruptcy risk. As in Table 6 presented, Schwartz’s embeddedness is comparable to Hofstede’s individualism, which would lead to the statement that a high level of individualism leads to a lower cost of debt, and Schwartz’s mastery to Hofstede’s masculinity, which leads to the statement, that high level of masculinity leads to the high cost of debt.

Continuing with the individual cultural values, the role of individualism is one of the most used ones in the literature. Antonczyk and Salzmann (2014) provide evidence that a high degree of individualism exhibits strong optimism and overconfidence, causing higher debt ratios; also, Gaganis et al. (2019), in a large study with around 40.000 European firms from 25 EU countries, found a positive relationship between individualism and debt through its essential role in the terms and conditions of getting credit and enhancing profitability. Similarly, Haq et al. (2018) and Wang & Esqueda (2014) find that high individualism cultures hold more leverage.

Wang & Esqueda (2014) also find evidence that a high level of uncertainty avoidance leads to lower levels of debt. These findings are in line with Haq et al. (2018), who also find similar results regarding the level of leverage and the level of uncertainty avoidance. Both findings are in contrast with Aggarwal & Goodell (2010), who find evidence for the opposite, that uncertainty avoidance leads to less equity and, therefore, to more leverage.

For the cultural value of long term orientation, Haq et al. (2018) and Wang & Esqueda (2014) find similar evidence, namely that high long term orientation rather leads to lower amounts of leverage.

Similar statements are for the value of power distance. Here, Haq et al. (2018) and Wang & Esqueda (2014) also find evidence that high level of power distance rather lead to lower amounts of leverage. This is again in contrast with Aggarwal & Goodell (2010), who find evidence for the opposite that a high level of power distance rather leads to more equity.

Masculinity and its association with financial architecture has not been studied in depth. However, due to the findings of Chui et al. (2016), with similar values from Schwartz, this gives a pointing direction.

Indulgence has only been studied by Wang & Esqueda (2014) in depth. They find that a high level of indulgence leads to more leverage.

Therefore, and based on the literature, the present study hypothesizes that there is a general influence of various cultural values on the capital structure and their use of either equity or debt capital within companies. The individual hypotheses state that:

Table 13: Hypotheses concerning the Impact of Culture on the Capital Structure of SMEs; Source: Authors' compilation

Hypothesis 1: Culture, measured by the following six Variables of Hofstede, has an influence on the capital structure of a company, measured by the level of debt:

Hypothesis 1a: Individualism has a negative influence on the level of debt, meaning the higher the level of Individualism, the higher the level of debt.

Hypothesis 1b: Uncertainty Avoidance has a positive influence on the level of debt, meaning the higher the level of Uncertainty Avoidance, the lower the level of debt.

Hypothesis 1c: Long Term Orientation has a negative influence on the level of debt, meaning the higher the level of Long Term Orientation, the higher the level of debt.

Hypothesis 1d: Power Distance has a negative influence on the level of debt, meaning the higher the level of Power Distance, the higher the level of debt.

Hypothesis 1e: Masculinity has a negative influence on the level of debt, meaning the higher the level of Masculinity, the higher the level of debt.

Hypothesis 1f: Indulgence has a negative influence on the level of debt, meaning the higher the level of Indulgence, the higher the level of debt.

3.2.2 The Impact of Religion on the Capital Structure of SMEs

The influence of religion on individuals, organizations, and institutions was substantially discussed in the previous literature review.⁴⁷ From this perspective, religion has a significant influence on organizations in at least three ways. Firstly, on the firm directly⁴⁸. Secondly,

⁴⁷ 2.4 The Influence of Religion in Economic

⁴⁸ 2.4.3 The Influence of Religion on Economic and Financial Behavior at the Organization

through the institutional level⁴⁹ and the impact from the institution on the organization (Institutional Theory by North (1992)).⁵⁰ Furthermore, the institutional level influences the individual level as well (Crossan, Lane, & White, 1999), which leads to, thirdly, the effect of the individual level on organizations (UET by Hambrick and Mason (1984))⁵¹.

When researchers speak about Religion the majority of the studies focus on Christian Religion, separated by Protestants and Catholics. Cai and Shi (2017) for example, state, when talking about Religion: “the religious population in the USA is made up of primarily Catholics and Protestants.” (Cai & Shi, 2017, p. 1). Generally speaking, being part of a religious organization gives/gave historically any individual or organization or individuals in organizations an advantage. Iannaccone (1998) described the benefits of being a member of an elite club and compared religious groups and churches as “Clubs”. These benefits would reach from established reputation, including, for example, low risk for money borrowing banks or individuals, to wealth in general or in the form of a higher salary, better returns, and safer assets and investments. In Smith’s words, for a “man of rank and fortunes [...] authority and consideration depend very much upon the respect which [...] society bears to him” (Smith, 1776, p. 795). Being part of could also be located in a specific religious area (Headquarter effect), which can influence the amount of debt, the conditions for the debt, misbehavior in financial reporting, and Investment risks or corporate risk-taking. Values such as risk aversion, ethical behavior, and honesty play an essential role for borrowers and lenders. These values are connected to religiosity, which assumes that they will be charged less interest. Cai and Shi (2017) document that firms in less religious areas have higher debt financing and a worse credit rating than companies in more religious areas. Banks (Adhikari & Agrawal, 2016) or firms (Hilary & Hui, 2009) in more religious areas have a lower risk exposure, hold safer assets, and have a more stable return on assets. Jiang et al. (2015) find that family firms founded by western religious entrepreneurs, in this case Christians, have lower leverage and fewer investments in fixed and intangible assets than non-religious or east religious (Buddhism) entrepreneurs. In conclusion, this study hypothesizes:

⁴⁹ 2.4.4 The Influence of Religion on Economic and Financial Behavior at the Institutional

⁵⁰ 2.2.4 Institutional Theory

⁵¹ 2.2.3 Upper Echelons Theory

Table 14: Hypothesis concerning the Impact of Religion on the Capital Structure of SMEs; Source: Authors' compilation

Hypothesis 2: Christianity has a positive influence on the level of debt, meaning the higher the level of Christians, the lower the level of debt.

Historically seen, Max Weber (1905) already suggests not only a difference between religious and non-religious people and their economic success, but he also entered into the field of dividing Catholic and Protestant believers. In his view, Protestants work harder, have tremendous economic success, and have better attitudes than people with the Catholic faith. Guiso et al. (2003) note that Weber's Protestant ethic attitudes result from the interaction of the doctrine of salvation and the concept of good works. His primary division was between Protestant and Catholic Countries, States, and Regions. For example, Becker & Woessmann (2009) state that Weber was right that Catholic regions were economically underdeveloped than Protestant regions. Audretsch et al. (2013) argue that the emergence of capitalism is linked to the Protestant work ethic. Nunziata et al. (2016) follow Weber (1905) and relate the roots of capitalism to Protestant ethical principles. These principles were more competitive than Catholicism since Protestant principles emphasize individualism, hard work, and ethics to achieve success. This finding statement accompanies the statement from Luther: "Wer treu arbeitet, der betet zweifach" (Who works hard, prays twice) (Barrenstein, Huber, & Wachs, 2016, p. 14) and "Arbeiten, dass man Güter krieget, das ist recht" (Working for goods, is right.) (Luther, 2016, p. 17).

He & Hu (2016) find evidence that bank loan terms differ for companies in areas with a high level of religiosity, in specific have lower interest rates, and El Ghouli et al. (2012) report that firms located in more religious counties, mainly protestant, enjoy better and cheaper equity financing. Moreover, Dryeng, et al. (2012) add that firms in regions with a high level of religiosity, measured by the adherents' report of the Association of Statisticians of American Religious Bodies, are less likely to engage in tax sheltering, which should lead to a higher level of equity. Finally, Baxamusa and Jalal (2014) investigated the capital structure of companies. Their findings show that an increase of 1% of the Protestant religiosity in a country leads to a 0.4% lower leverage and fewer frequent debt issuances. Furthermore, they provide a significant effect on the firms' adjustment speeds toward the target capital structure. Their findings indicate

a difference in Protestant- and Catholic-marked regions and companies and that firms in a Catholic majority city/state will have a higher debt level (Baxamusa & Jalal, 2014).

In conclusion, this study hypothesizes:

Table 15: Hypotheses concerning the Impact of Catholicism and Protestantism on the Capital Structure of SMEs;
Source: Authors' compilation

Hypothesis 3: Protestantism has a positive influence on the level of debt, meaning the higher the level of Protestants, the lower the level of debt.

Hypothesis 4: Catholicism has a negative influence on the level of debt, meaning the higher the level of Catholics, the higher the level of debt.

3.2.3 The Impact of Culture and Religion on Risk-Taking Behavior on SMEs

The last two parts have concentrated on the connection of the firm's capital structure and cultural values of a country as well as the level and kind of religious affiliation within a country. In this part, there will be a linkage between cultural values and religious affiliation on the one hand and the risk exposure of a firm on the other hand.

As presented in the previous part, this influence is not only visible in the capital structure of a firm. It is also seen in risk-taking. Young (2013) finds a significant impact of culture, values, and religion on accounting practices and risk-taking. Linking risk-taking to individual cultural values, the literature states the following:

Ashraf et al. (2016) declare that bank risk-taking is significantly higher in countries with high individualism. Similar results are presented by Mourouzidou-Damtsa et al. (2019), who find a positive association between individualism and bank risk-taking. However, on the contrary, Chui et al. (2016) find evidence that Schwartz's embeddedness, a synonym for Hofstede's individualism, is negatively related to bankruptcy risk.

Ashraf et al. (2016) state that a high level of Uncertainty Avoidance leads to increased risk, and Aggarwal and Goodell (2014) find that uncertainty avoidance leads to less funding and favor debt financing (Aggarwal & Goodell, 2010), which can also be seen as high risk. However, contrary to this position, low levels of uncertainty avoidance also led to high levels of market risk (Verduch Arosa, Richie, & Schumann, 2014).

Long term orientation and its association with risk-taking has not been in depth. However, and in line with the hypothesis of the capital structure, the pointing direction seems evident that the higher the level of long-term orientation, the lower the level of risk.

Aggarwal and Goodwell (2010) identify differences in the national architecture for financial intermediation and show that cultural, legal and other national characteristics determine whether a company in a country are more bank or more equity-financed and provide evidence that higher levels of power distance increase equity markets, which can be seen as a lower level of risk. On the opposite, Verduch et al. (2014) find that a low level of power distance leads to high risk-taking, and Ashraf et al. (2016) find that a high level of power distance leads to a high level of risk.

Aggarwal and Goodell (2014) find that a high level of masculinity lead to less funding so an increase of risk. On the contrary, Chui et al. (2016) find that Schwartz's mastery, similar to Hofstede's masculinity, is positively related to bankruptcy risk.

Last but not least indulgence and its association with risk-taking has not been studied in depth. However, and in line with the hypothesis of the capital structure, the pointing direction seems evident that the higher the level of indulgence, the higher the level of risk.

In conclusion, this study hypothesizes:

Table 16: Hypotheses concerning the Impact of Culture on Risk Taking Behavior of SMEs; Source: Authors' compilation

Hypothesis 5: Culture, measured by the following six Variables of Hofstede, has an influence on the risk of a company:

Hypothesis 5a: Individualism has a negative influence on the level of risk, meaning the higher the level of Individualism, the higher the level of risk.

Hypothesis 5b: Uncertainty Avoidance has a positive influence on the level of risk, meaning the higher the level of Uncertainty Avoidance, the lower the level of risk.

Hypothesis 5c: Long Term Orientation has a positive influence on the level of risk, meaning the higher the level of Long Term Orientation, the lower the level of risk.

Hypothesis 5d: Power Distance has a negative influence on the level of risk, meaning the higher the level of Power Distance, the higher the level of risk.

Hypothesis 5e: Masculinity has a negative influence on the level of risk, meaning the higher the level of Masculinity, the higher the level of risk.

Hypothesis 5f: Indulgence has a negative influence on the level of risk, meaning the higher the level of Indulgence, the higher the level of risk.

Moreover, not only the cultural values affect the risk-taking of a firm. Religious affiliation and risk aversion, and significant risk-taking in investment were presented in various studies.

Research has also concentrated on the connection of the level and kind of religious affiliation within a country and the risk exposure of a firm on the other hand. Again, as mentioned above, when speaking about religion the majority of the studies focus on Christian religion (Cai & Shi, 2017). Young (2013) states a significant influence of religion, values, and culture, on accounting practices and risk-taking.

Religious affiliation and risk aversion, and significant risk-taking in investment were presented in various studies. Hilary and Hui (2009) link the level of religiosity and risk aversion of the

CEO to organizational behavior, He and Hu (2016) find that lenders value traits of religious adherents, such as honesty, ethical behavior, and risk aversion. Kanagaretnam et al. (2015) find evidence that local religiosity matters for risk-taking in general. As a result, firms tend to hold safer assets, growing slower but with a steady and regular income (McGuire, Omer, & Sharp, 2012). Adhikari & Agrawal (2016) state that “[...] the literature is quite clear that religious people of any faith generally display greater risk aversion.” (p. 290).

In conclusion, this study hypothesizes:

Table 17: Hypotheses concerning the Impact of Religion on Risk Taking Behavior of SMEs; Source: Authors’ compilation

<p>Hypothesis 6: Christianity has a positive influence on the level of risk, meaning the higher the level of Christians, the lower the level of risk.</p>
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Weber (1930) and Stulz and Williamson (2003) find that Protestantism encourages more risk-tolerance than Catholicism, due to more entrepreneurship encouragement and Baxamusa and Jalal (2015) state that Catholic CEOs tend to take less risk. However, and contrary to that, Grullon et al. (2010) find that companies that had their headquarters in more religious areas, with an even higher significance in areas with a higher percentage of Protestants, practice less aggressive management, have lower amounts of lawsuits and compensate their management less and lower their general risk exposure. Adhikari and Agrawal (2016) find that Catholics tend to prefer certain type of risks, while Protestants shun risk. Moreover, Diez-Esteban et al. (2019) indicate that companies from Protestant nations tend to take less risk than Catholic ones. Besides, they present evidence that companies with large institutional investors as shareholders are not affected by these findings than individual or family-owned businesses. Finally, Shu et al. (2012) find that mutual fund managers’ speculative risk-taking behavior differs, depending on the underlying local religious beliefs. Specifically, they find evidence that managers in high Catholic areas trade more aggressively, have higher portfolio concentrations, and have higher return volatilities with the opposite results in areas with a higher amount of protestant believers. In conclusion, this study hypothesizes:

Table 18: Hypotheses concerning the Impact of Protestantism and Catholicism on Risk Taking Behavior of SMEs;
Source: Authors' compilation

Hypothesis 7: Protestantism has a positive influence on the level of risk, meaning the higher the level of Protestants, the lower the level of risk.

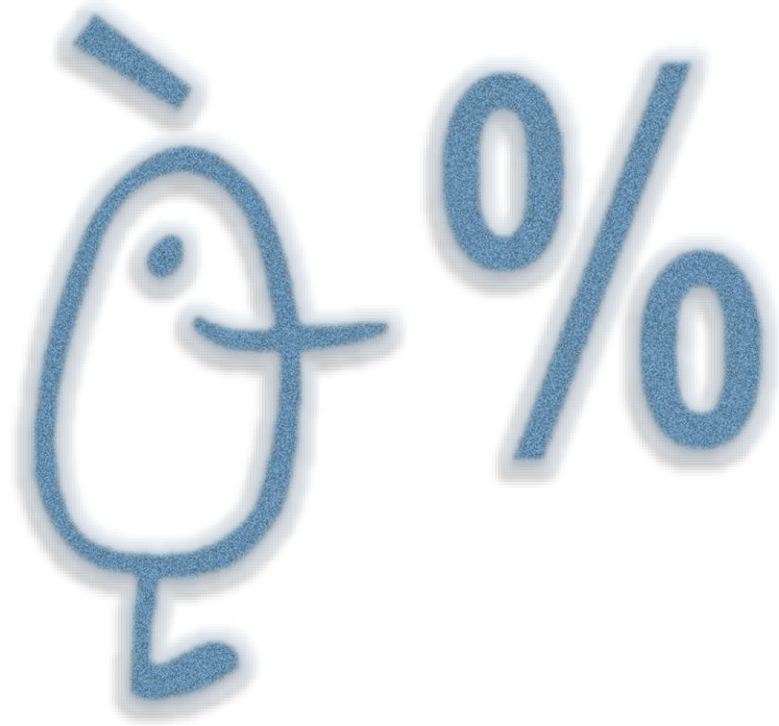
Hypothesis 8: Catholicism has a negative influence on the level of risk, meaning the higher the level of Catholics, the higher the level of risk.

Table 19: Hypotheses concerning the Impact of Culture and Religion on the Capital Structure of SMEs; Source: Authors' compilation

Hypotheses 1 - 4	
H1:	Culture, measured by the following six Variables of Hofstede, has an influence on the capital structure of a company, measured by the level of debt:
H1a:	Individualism has a negative influence on the level of debt, meaning the higher the level of Individualism, the higher the level of debt.
H1b:	Uncertainty Avoidance has a positive influence on the level of debt, meaning the higher the level of Uncertainty Avoidance, the lower the level of debt.
H1c:	Long Term Orientation has a negative influence on the level of debt, meaning the higher the level of Long Term Orientation, the higher the level of debt.
H1d:	Power Distance has a negative influence on the level of debt, meaning the higher the level of Power Distance, the higher the level of debt.
H1e:	Masculinity has a negative influence on the level of debt, meaning the higher the level of Masculinity, the higher the level of debt.
H1f:	Indulgence has a negative influence on the level of debt, meaning the higher the level of Indulgence, the higher the level of debt.
H2:	Christianity has a positive influence on the level of debt, meaning the higher the level of Christians, the lower the level of debt.
H3:	Protestantism has a positive influence on the level of debt, meaning the higher the level of Protestants, the lower the level of debt.
H4:	Catholicism has a negative influence on the level of debt, meaning the higher the level of Catholics, the higher the level of debt.

Table 20: Hypotheses concerning the Impact of Culture and Religion on Risk Taking Behavior of SMEs; Source: Authors' compilation

Hypotheses 5 - 8	
H5:	Culture, measured by the following six Variables of Hofstede, has an influence on the risk of a company:
H5a:	Individualism has a negative influence on the level of risk, meaning the higher the level of Individualism, the higher the level of risk.
H5b:	Uncertainty Avoidance has a positive influence on the level of risk, meaning the higher the level of Uncertainty Avoidance, the lower the level of risk.
H5c:	Long Term Orientation has a positive influence on the level of risk, meaning the higher the level of Long Term Orientation, the lower the level of risk.
H5d:	Power Distance has a negative influence on the level of risk, meaning the higher the level of Power Distance, the higher the level of risk.
H5e:	Masculinity has a negative influence on the level of risk, meaning the higher the level of Masculinity, the higher the level of risk.
H5f:	Indulgence has a negative influence on the level of risk, meaning the higher the level of Indulgence, the higher the level of risk.
H6:	Christianity has a positive influence on the level of risk, meaning the higher the level of Christians, the lower the level of risk.
H7:	Protestantism has a positive influence on the level of risk, meaning the higher the level of Protestants, the lower the level of risk.
H8:	Catholicism has a negative influence on the level of risk, meaning the higher the level of Catholics, the higher the level of risk.



CHAPTER 4

RESEARCH METHODOLOGY

4 RESEARCH METHODOLOGY

The previous chapter has described the development and description of the model through the different stages and was finalized with the hypotheses. This chapter defines the sample, and later on, the variables. Therefore, in the first part of this chapter, the sample and the individual data collection will be described. The second part will deal with the definition of the dependent, independent, and control variables.

4.1 Definition of Sample

This study was carried out on a large sample of European SMEs. For the data it used the Bureau Van Dijk ORBIS[®] database to obtain the sample and all firm data. The sample included all Pan-European firms with 50 to 250 employees, which were not subsidiary firms, and which were active during the period. Only manufacturing medium-sized firms (MEs) were chosen and included.

In contrast to prior studies, which only used US-Data (Hilary and Hui (2009), Adhikari and Agrawal (2016), He and Hu (2016), and Cai and Shi (2017)), or world wide data (Baxamusa and Jalal (2014), Jiang et al. (2015), and Diez-Esteban et al. (2019)), the main focus of this study is on firms in Europe and follows Gaganis et al. (2019) and uses firms that had to be located in the area of the European Union and one of the 27 States of the EU. Even though Great Britain still was a member of the EU during the requested period (2015-2019), it was not a member during data collection (2021), and therefore firms from Great Britain were excluded. Furthermore, this study follows McGuinness et al. (2018) – their unbalanced sample ranges from 27% in Spain, to 0,02% in Latvia – and Diez-Esteban et al. (2019) – their unbalanced sample ranges from 26,25% in the United States, to 0,25% in Luxembourg – and uses an unbalanced sample, since the pan-European countries vary in size and amount of companies. With this aim, the firm data was collected in March 2021 in the ORBIS[®] database⁵², to achieve the goal to select a very large but manageable dataset from small- and medium-sized enterprises.

As Iborra et al. (2020) have shown, the selection of only medium-size enterprises, from the small and medium-sized enterprises, has the advantage that the data is more reliable since

⁵² ORBIS[®] is an online database compiled by Bureau Van Dijk – A Moody's Analytics Company

external auditing of their accounts and specific governmental rules for accounting and publishing, presents more reliable data. Therefore, it makes sense to exclude micro and small enterprises. The definition of the size of an SME can be determined in three different ways. Firstly, the amount of sales of a firm (Hilary and Hui (2009), Jiang et al. (2015)), secondly, by the balance sheet total / total assets / a log of the total assets (Baxamusa and Jalal (2014) and Adhikari and Agrawal (2016)), and thirdly by the number of employees / a log of the number of employees (Dasí et al. (2015) and Iborra et al. (2022)). The present study uses the last option and defines the medium size firms as those with between 50 and 250 employees.

SMEs' capital structure is related to the industry, being apparent differences between manufacturing and service industries. Following Dasí et al. (2015), Dolz et al. (2019), and Iborra et al. (2022), therefore, this study opts to define that the firms had to belong to the manufacturing sector. The background and explanation of this is that firms in the manufacturing industry tend to have a high amount of intense capital assets, such as land, buildings, equipment, machines, etc., and a higher amount of current assets.

Furthermore, the dataset should not include firms, which were subsidiaries of larger companies, such as MNE.

Therefore, the sample obtained through ORBIS[®] search was defined with the following restrictions:

- Region: European Union (27)
- Status: Active and Inactive Firms
- Number of Employees: Minimum 50 – Maximum 250
- NAICS 2017 (Primary Code): Ranking – 31 - 33 – Manufacturing
- Remove any subsidiary of another company from the current set: Minimum 50.01% of known or unknown shareholders, Subs, owned by a company were excluded.

The result for this search had a total of 32.197 companies from 25 countries. The dataset should collect and contain data from 2015-2019. Unfortunately, there was no data, with these restrictions, available for firms in Cyprus and Malta. Table 21 shows the individual results by country.

Table 21: Overview of the amount of Firm Data in the main collection; Source: Authors' compilation

Country	Number of firms	Country	Number of firms
Austria	727	Italy	6.149
Belgium	834	Latvia	312
Bulgaria	1.334	Lithuania	535
Croatia	442	Luxembourg	1
Czech Republic	928	Netherlands	733
Denmark	565	Poland	1.189
Estonia	255	Portugal	1.594
Finland	411	Romania	1.796
France	1.587	Slovakia	6
Germany	7.658	Slovenia	328
Greece	328	Spain	2.200
Hungary	1.224	Sweden	899
Ireland	162	Total	32.197

In detail, the whole dataset had to include certain variables, which will be further displayed in the next section for each year from 2015 to 2019. Overall, the dataset had a total of year observations for each country, presented in Table 22.

Table 22: Overview of the year observations of Firm Data in the main collection; Source: Authors' compilation

Country	Number of year observations	Country	Number of year observations
Austria	3.635	Italy	30.745
Belgium	4.170	Latvia	1.560
Bulgaria	6.670	Lithuania	2.675
Croatia	2.210	Luxembourg	5
Czech Republic	4.640	Netherlands	3.663
Denmark	2.825	Poland	5.945
Estonia	1.275	Portugal	7.970
Finland	2.055	Romania	8.980
France	7.935	Slovakia	30
Germany	38.290	Slovenia	1.640
Greece	1.640	Spain	11.000
Hungary	6.120	Sweden	4.495
Ireland	810	Total	160.985

A second step, includes taking into account cases of missing data. On one hand, the information from Luxembourg was deleted, due to the fact that there was only one firm. On the other hand, the firms with completely missing variables were separated from the primary dataset. This led to 25.819 firms, which had all data for all the firm variables. Additional 1.964 firms had partial data, in the five-year panel data set, which lead to a total of 27.783 firms.

2.303 firms had some, however not all needed variables, which were needed for the later regression. Table 23 presents an overview over the firms of each country presents.

Table 23: Overview of the number of Firms, after data cleaning; Source: Authors' compilation

Country	Number of initial firms	Number of firms after data cleaning	Percentage from initial number of firms
Austria	727	627	86.2%
Belgium	834	834	100%
Bulgaria	1.334	1.330	99.7%
Croatia	442	442	100%
Czech Republic	928	914	98.5%
Denmark	565	565	100%
Estonia	255	255	100%
Finland	411	409	99.5%
France	1.587	1.586	99.9
Germany	7.658	3.540	46.2%
Greece	328	328	100%
Hungary	1.224	1.124	91.8%
Ireland	162	137	84.6%
Italy	6.149	6.144	99.9%
Latvia	312	312	100%
Lithuania	535	479	89.5%
Luxembourg	1	0	0%
Netherlands	733	650	88.7%
Poland	1.189	1.189	100%
Portugal	1.594	1.594	100%
Romania	1.796	1.796	100%
Slovakia	6	6	100%
Slovenia	328	328	100%
Spain	2.200	2.200	100%
Sweden	833	894	100%
Total	32.197	27.783	86.3%

Additionally, some independent variables were not available for all countries. Schwartz did not have any available data for Lithuania, whereas, GLOBE did not have any available data for Belgium, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Romania, and Slovakia.⁵³ In both cases the sample was adapted when entering the above independent variables into the regression analysis.

4.2 Definition of Variables

The present study uses various variables to test the theoretical model developed in the previous section empirically. The author presents the variables in three main sections that include dependent variables – related to the SMEs capital structure and its risk-, independent variables – including cultural and religious variables -, and various control variables, including firm and national level variables.

The individual definition of the variables, including an overview of various previous studies where the variables have been used, will follow up in the next section.

4.2.1 Dependent Variables

The dependent variables of the present study represent two factors, the firm's capital structure, and the risk exposure of the enterprise. Capital structure is measured through the amount of leverage by the debt-to-assets and secondly debt-to-revenue, and firm's risk through the standard deviation of ROE.

The following section presents an overview of the literature, which the present study is following, and at the end of this section, the author provides an overview of all the previous studies, which have used similar dependent variables in their studies.⁵⁴

⁵³ See Appendix: Table 78: Overview of the individual Firm Data from each country after evaluating the data of the main Cultural Models and Religion; Source: Authors' compilation

⁵⁴ Table 24: Overview of Dependent Variables I; Source: Authors' compilation

4.2.1.1 Capital Structure

Speaking about capital structure, researchers always investigate the amount of equity and leverage and their proportion to each other. Therefore, most researchers usually use the amount of leverage to analyze the capital structure in detail. The leverage can be displayed, besides the actual amount, using a total-debt-to-assets ratio, which shows the percentage amount of leverage. Moreover, the amount of equity can be calculated through subtraction of one, and therefore both parts of the capital structure are displayed in one variable.⁵⁵ However, as Verduch Arose *et al.* (2014) state, “Our dependent variable is the debt-to-asset ratio, and not all researchers agree on how this should be measure.” (Verduch Arosa, Richie, & Schumann, 2014, p. 182); i.e., the use of ratios as variables, and here the use of a debt-to-asset ratio, is not uncontroversial. Studies with headlines, such as “Divided We Fall: How Ratios Undermine Research in Strategic Management” from Certo *et al.* (2018), deal with the adverse effects of ratios as dependent-, independent-, or control variables, however, at the same time the authors state that their use in financial and management research is common. As Jasienski and Bazzaz state: “Empirical researchers love ratios – statisticians loathe them” (Jasienski & Bazzaz, 1999, p. 321). Wisemann (2009) reported that 74% of all empirical articles published in the Strategic Management Journal in 2007 included at least one ratio. In 2015 the use of ratios even increased to 79% of all empirical articles published in the SMJ (Certo, Budenbark, Kalm, & LePine, 2018).

In the specific measurement of the dependent variable, for example, Titman and Wessels (1988) use six different ratios for the measurement of short-term and long-term debt. The exact measurement is used by Mogha and Williams (2021), whereas Rashid *et al.* (2021) even use ratios to measure short-term, long-term, and total debt. Yin *et al.* (2020) use various ratios to evaluate the firm-specific credit risks, using the debt asset ratio, and Rokhanyati *et al.* (2019) use a debt ratio as a measurement for the total leverage of SMEs. Other recent studies, which have used leverage as part of their research in connection to cultural or religious influences are, for example, and among others: Chui *et al.* (2002), Jacobson *et al.* (2005), Baxamusa and Jalal (2014), Jiang *et al.* (2015), Adhikari and Agrawal (2016), Chen *et al.* (2016), Chui *et al.* (2016), He and Hu (2016), Mourousidou-Damtsa *et al.* (2019), Diez-Esteban *et al.* (2019), Li *et al.*

⁵⁵ The present study does not look into hybrid capital or the differentiation of certain kinds of equity or debt.

(2019), Papageorgiou et al. (2020), and Czerwonka and Jaworski (2021). Therefore, the present study follows the various referenced researchers, and uses two different ratio as dependent variables, due to the uniqueness of the data. Firstly, the total debt to asset ratio, as one of the mostly used variable to measure leverage / capital structure in the literature, is used. Secondly, and caused by through the SME data, this study uses the total debt to revenue ratio and argues that the debt to revenue ratio has a higher predicting power for small and medium size firms, linking the capital structure of the SMEs to the ability of paying back their leverage through their revenue. The measurements for the capital structure are calculated in the following way:

$$\textit{Total Debt to Asset Ratio} = \frac{\textit{Short Term Debt} + \textit{Long Term Debt}}{\textit{Total Assets}}$$

$$\textit{Total Debt to Revenue Ratio} = \frac{\textit{Short Term Debt} + \textit{Long Term Debt}}{\textit{Revenue}}$$

4.2.1.2 Risk

Researchers in strategy management and finance fields had place attention to the measurement of risk in itself or in a firm. For example, Falkner and Hiebl (2015) observed various forms of risk in SMEs. These risks include general entrepreneurial risk, measured, for example, by the lengths of time being an entrepreneur (Dvorsky, Schönfeld, Kotaskova, & Petrakova, 2018); so, the longer you are an entrepreneur the less risky, since managers seek to steer away from trouble (Qiu, Rudkin, & Dlotko, 2020). Also the risk in SMEs has been linked to its ownership characteristics, e.g., to the wealth of the family owning the firm (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007), the general financial position of the owner (Bruns & Fletcher, 2008), or the amount of stake the family/entrepreneur still has in the management of the firm (Belas, Dvorsky, Kubalek, & Smrcka, 2018); in some studies the analysis focuses on the risk of SMEs strategies as the risk in the internationalization of the firm, which can lead to failure and, in the worst case, to bankruptcy (George, Wiklund, & Zahra, 2005); management risk, caused by gender and the level of education of the CEO (Belas, Kljucnikov, Vojtovic, & Sobekova-Majkova, 2015), credit risk (Kliestik & Cug, 2015), and the potential risk of bankruptcy determined by the Altman Z Score (Diez-Esteban, Farinha, & Garcia-Gomez, 2019). As a consequence, the measurement of risk can be done in multiple ways. Various researchers have

used a scale of entrepreneurial orientation (EO) to measure these risks (Kreiser *et al.* (2010) & Kreiser *et al.* (2013)) or Covin and Wales (2012) presented an overview of different EO models used by prior research, mainly based on extensive questionnaires.

Viewed from the financial point of view of a firm, interest rate risk is a significant part of credit risk for an SME. SMEs are highly dependent on external finance since loans, next to equity, are the primary source of financing. The use of ratios is a usual method for measuring risk. As stated above, ratios are common in strategic management; however, their usage is not uncontroversial (Certo, Budenbark, Kalm, & LePine, 2018). For instance, Verduch Arosa *et al.* (2014), following Titman and Wessels (1988) and Ramirez and Kwok (2009), used the debt to asset ratio. Gaganis *et al.* (2019), for their part, used ROA as a dependent variable for profitability, while Rashid *et al.* (2021), in a panel study, used three ratios for measuring corporate risk: short-term, long-term, and total leverage divided by assets. In line with Titman and Wessels (1988), Mogha and Williams (2021) evaluated corporate risk-taking employing the debt-to-equity ratio. Another usual way of measuring risk is the standard deviation of ROA or ROE, as used by Killins *et al.* (2020), Saif-Alyousfi *et al.* (2020), Dalwai *et al.* (2021) and Rutkowska-Ziark (2022). So, the third dependent variable, in line with various previous research, is the standard deviation of the return on equity ratio, calculated on five-year panel data. This study argues that a consistent return on equity is less risky than changing returns during a time period. The variable deviation of return on equity is calculated as follows:

$$\text{Return on Equity} = \frac{\text{Net Profit}}{\text{Total Assets} - \text{Total Debt}}$$

$$\text{Standard Deviation of Return on Equity} = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2}$$

Table 24: Overview of Dependent Variables I; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Cultural or Religious Field
Leverage measured through:		2015-2019	ORBIS®	
<ul style="list-style-type: none"> • Total Debt to Total Asset • Total Debt to Total Revenue 	<p>Y1</p> <p>Y2</p>			<ul style="list-style-type: none"> • Titman and Wessels (1988) • Chui et al. (2002) • Jacobson et al. (2005) • Ramirez and Kwok (2009) • Baxamusa and Jalal (2014) • Verduch Arose et al. (2014) • Jiang et al. (2015) • Adhikari and Agrawal (2016) • Chen et al. (2016) • Chui et al. (2016) • He and Hu (2016) • Mourousidou-Damtsa et al. (2019) • Diez-Esteban et al. (2019) • Li et al. (2019), • Rokhanyati et al. (2019) • Papageorgiou et al. (2020) • Rashid et al. (2020) • Yin et al. (2020) • Czerwonka and Jaworski (2021) • Mogha and Williams (2021)

Table 25: Overview of Dependent Variables II; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Cultural or Religious Field
Risk measured through: <ul style="list-style-type: none"> Standard Deviation of ROE 	Y3	2015-2019	ORBIS®	<ul style="list-style-type: none"> Titman and Wessels (1988) Ramirez and Kwok (2009) Verduch Arosa et al. (2014) Dierker et al. (2019) Li et al. (2019) Killins et al. (2020) Rashid et al. (2020) Saif-Alyousfi et al. (2020) Li et al. (2021) Mogha and Williams (2021) Dalwai et al. (2022) Rutkowska-Ziarko (2022)

4.2.2 Independent Variable

The independent variables are divided into two parts. Firstly, the cultural level variables, and secondly, the religious variables. There appear, as described before, three different data collections, due to robustness check reasons, with different variables within the cultural variables, due to the different cultural frameworks. The variables are portrayed in the following section, including the individual variables and their numbers for each country. At the end of each section is a table that gives an overview of each variable.

4.2.2.1 Cultural Variables

The cultural level variables explain the individual characteristics, in a specific country, with corresponding values and practices. Reuter (2011) presents a survey of articles combining “culture and finance”. As illustrated in the literature review, nowadays appear three leading models, among various other cultural models and explanations, used in economics to test cultural influences on firms, decision making, and capital structures. These three models are the model of Hofstede (2021), the model of Schwartz (2008), and the model from the GLOBE Study (2020). These models have been compared in different studies with each other, either entirely as a whole or just for individual dimensions of them (value comparison).

Different researchers have compared Hofstede’s cultural dimensions with Schwartz’s cultural framework (Gouveia and Ross (2000), Ng et al. (2007), Hsu et al. (2013), Voss et al. (2014), Ng and Lim (2019), and Jacobs et al. (2021)), others have compared Hofstede’s cultural dimensions with the GLOBE Study, (Smith (2006), Javidan et al. (2006), Tung and Verbeke (2010), Shi and Wang (2011), Brewer and Venaik (2011), Venaik and Brewer (2013), and Venaik and Zhu (2013)), and others have compared the GLOBE Study with Schwartz’s cultural model (Knafo, Roccas, & Sagiv, 2011).

The particular explanation of each model, and their use in previous similar studies, follows in the subsequent chapter.

4.2.2.1.1 Hofstede Variables

The cultural variables of Hofstede are one of the mainly used cultural models and were used in similar studies, for example, if culture can influence corporate cash holdings (Chen, Dou, Rhee, Truong, & Veeraraghaven, 2015), if culture influences the profitability (Gaganis, Pasuiuras, & Voulgari, 2019), if national culture can predict the cost of debt – (Chui et al. (2016) & Chen et al. (2016)), if culture can determine corporate risk-taking (Diez-Esteban, Farinha, & Garcia-Gomez, 2019), if culture can influence the kind of debt in firms (Mogha & Williams, 2021), and if culture has an influence on the capital structure (Ramirez and Kwok (2009) and Rashid et al. (2020)).

Following them, the six individual independent variables, which have been partially or completely used, are:

1. Power Distance
2. Individualism
3. Masculinity
4. Uncertainty Avoidance
5. Long Term Orientation
6. Indulgence

The particular explanation of each variable is displayed in a previous part.⁵⁶ The following tables present an overview of the studies which have used Hofstede's model for their research.

⁵⁶ 2.3.3.6 Gert Hofstede

Table 26: Overview of the Independent Culture Variables of Hofstede; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Finance Field
Individualism	Cj3	2010	(Hofstede, 2021)	<ul style="list-style-type: none"> • Ramirez and Kwok (2009) • Chen et al. (2015) • Chen et al. (2016) • Chui et al. (2016) • Diez-Esteban et al. (2019) • Gaganis et al. (2019) • Rashid et al. (2020) • Mogha and Williams (2021)
Uncertainty Avoidance	Cj4			
Power Distance	Cj6			
Masculinity	Cj7			
Long Term Orientation	Cj8			
Indulgence	Cj9			

4.2.2.1.2 Schwartz Variables

The cultural values of Schwartz is another often-used cultural model to explain the influence of culture on economic decisions. Schwartz (2012) identifies ten fundamental human values, which, in his theory, form the identity of individuals; these individuals, as part of a particular culture, lead to the cultural values of a country, and presents a theory of seven cultural value orientations. He identifies and generates, through his worldwide culture mapping (76 national cultures), seven transnational cultural groupings: West European, English-speaking, Latin America, East European, South Asian, Confucian influenced, and African and Middle Eastern. (Schwartz S. H., 2006). Chui et al. (2002) tested Schwartz cultural values to predict the capital structure and height of financial leverage. Li et al. (2011) explored the relationship between capital structure decisions and the culture of the firm's home country in joint ventures, and Chui et al. (2016) specialized on the cost of debt prediction through cultural values. Katri and Tuuli (2016) show the influence of culture, with the framework from Hofstede, on working capital management but use Schwartz's framework for their robustness check.

Schwartz's variables are slightly different from the ones from Hofstede, however quantitative too. The following seven independent variables will be tested in the model:

1. Harmony
2. Embedded
3. Hierarchy
4. Mastery
5. Affective Autonomy
6. Intellectual Autonomy
7. Egalitarian Commitment

The individual explanation of each variable is displayed in a previous part.⁵⁷

The following tables present an overview of the studies which have used Schwartz's model for their research.

⁵⁷ 2.3.3.2 Shalom Schwartz

Table 27: Overview of the Independent Culture Variables of Schwartz; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Finance Field
Harmony	Cj11	2008	(Schwartz, 2008)	<ul style="list-style-type: none"> • Chui et al. (2002) • Li et al. (2011) • Chui et al. (2016) • Katri and Tuuli (2016)
Embedded	Cj12			
Hierarchy	Cj13			
Mastery	Cj14			
Affective Autonomy	Cj15			
Intellectual Autonomy	Cj16			
Egalitarian Commitment	Cj17			

4.2.2.1.3 GLOBE Study Variables

The cultural variables of the GLOBE Study are among the essential cultural models, and in the present study, the third cultural model. Catana and Catana (2010) use the GLOBE Study practices and values in a study of differences in the finance industry, Peretz and Rosenblatt (2011) for differences in corporate investments, and Pradkhan (2016) in a study about differences in bond portfolios. Furthermore, Stephan and Pathak (2016), and Kimura and Nishikawa (2018) use the values and practices for leadership and decision-making research. The GLOBE study model is divided into nine “practices” and eight “values”. The following eighteen independent variables will be tested in the model:

1. Uncertainty Avoidance Societal Practices
2. Future Orientation Social Practices
3. Power Distance Social Practices
4. Collectivism I Societal Practices
5. Human Orientation Societal Practices
6. Performance Orientation Societal Practices
7. Collectivism II Societal Practices
8. Gender Egalitarianism Societal Practices
9. Assertiveness Societal Practices
10. Uncertainty Avoidance Societal Values
11. Future Orientation Societal Values
12. Power Distance Societal Values
13. Collectivism I Societal Values
14. Human Orientation Societal Values
15. Performance Orientation Societal Values
16. Collectivism II Societal Values
17. Gender Egalitarianism Societal Values
18. Assertiveness Societal Values

The particular explanation of each variable is displayed in a previous part.⁵⁸ The following tables present an overview of the studies which have used GLOBE’s model for their research.

⁵⁸ 2.3.3.4 GLOBE Study

Table 28: Overview of the Independent Culture Variables of GLOBE Study – Practices & Values; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Finance Field
Uncertainty Avoidance Societal Practices	Cj20	2010	(House, Hanges, Javidan, Dorfman, & Gupta, 2020)	<ul style="list-style-type: none"> • Catana and Catana (2010) • Peretz and Rosenblatt (2011) • Pradkhan (2016) • Stephan and Pathak (2016) • Kimura and Nishikawa (2018)
Future Orientation Societal Practices	Cj21			
Power Distance Social Practices	Cj22			
Collectivism I Societal Practices	Cj23			
Human Orientation Societal Practices	Cj24			
Performance Orientation Societal Practices	Cj25			
Collectivism II Societal Practices	Cj26			
Gender Egalitarianism Societal Practices	Cj27			
Assertiveness Societal Practices	Cj28			
Uncertainty Avoidance Societal Values	Cj30			
Future Orientation Societal Values	Cj31			
Power Distance Societal Values	Cj32			
Collectivism I Societal Values	Cj33			
Human Orientation Societal Values	Cj34			
Performance Orientation Societal Values	Cj35			
Collectivism II Societal Values	Cj36			
Gender Egalitarianism Societal Values	Cj37			
Assertiveness Societal Values	Cj38			

4.2.2.2 Religious Variables

The second independent variable in the present model displays “Religion”. Prior research had two different approaches in measuring “Religion” within a country. The first approach, is through the data of the World Values Survey (WVS), and the underlying question “Do you believe in God?”. Studies with this approach were, among others, Barro and McCleary (2003), Barro and McCleary (2005), Roth and Kroll (2007), Eum (2011), and Chen et al. (2016). The second approach is the measurement of religion through affiliation. Stulz and Williamson (2003) and Diez-Esteban et al. (2019) used the World Fact Book, whereas Hilary & Hui (2009), McGuire et al. (2012), and Adhikari and Agrawal (2016) used the ARDA Religiosity numbers. Depending on the study, they include only one religious variable or more. In the first case they measure the percentages of Christians in total; in the second, they take into account the individual percentage of the particular Christian Religions, such as Catholics, and Protestants. Depending on the study, one or a mix of all the variables was used, for example, if religion matters in corporate decision making (Hilary & Hui, 2009), to define if religion matters in family-firm risk-taking (Jiang, Jiang, Kim, & Zhang, 2015), if religion matters for corporate risk-taking (Diez-Esteban, Farinha, & Garcia-Gomez, 2019), and to explore the connection of religion on bank risk-taking (Adhikari & Agrawal, 2016). Furthermore, Chen et al. (2016) connected religiosity to the cost of debt, while He and Hu (2016) find evidence that bank loan terms differ within different religious areas. Garcia-Muina et al. (2020) measure the influence of religion on the location for new subsidiaries, while Baxamusa & Jalal (2014) used a measurement of religion to identify effects on capital structure, and Cai and Shi (2017) state that religious norms influence corporate debt financing. The religious affiliation data for this study was collected from the database BPB (Bundeszentrale für politische Bildung, 2019), and uses the following variables:

1. Percentage of Christians
2. Percentage of Catholics
3. Percentage of Protestants

The individual variables, as well as a general overview, will be shown in the following tables.

Table 29: Overview of the Independent Religious Variables; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles with a connection to the Finance Field
Percentage of Christians	Cj0	2015	(Bundeszentrale für politische Bildung, 2019)	<ul style="list-style-type: none"> • Barro and McCleary (2003) • Stulz and Williamson (2003) • Barro and McCleary (2005) • Roth and Kroll (2007) • Hilary and Hui (2009) • Eum (2011) • McGuire et al. (2012) • Baxamusa and Jalal (2014) • Jiang et al. (2015) • Adhikari and Agrawal (2016) • Chen et al. (2016) • He and Hu (2016) • Cai and Shi (2017) • Diez-Esteban, et al. (2019)
Percentage of Catholics	Cj1			
Percentage of Protestants	Cj2			

4.2.3 Control Variables

The present study has various control variables for its regression model. The collection of the variables follows the argumentation of Hilary and Hu (2009)⁵⁹ and Bernerth and Aguinis (2016) and is divided into two main parts. On the one hand, control variables at the unit (firm) level, and on the other hand, control variables at the group (country) level. The following part presents each variable and Table 30 provides an overview at the end of the section.

On the firm level, the present paper uses the following control variables:

Return on Assets: The Return on Assets is a ratio calculated with the Net Income divided by the total amount of Assets. It was a control variable in different studies when leverage and risk is analyzed, such as Adhikari and Agrawal (2016), Chen et al. (2016), Chui et al. (2016), He and Hu (2016), Cai and Shi (2017), Mourousidou-Damtsa et al. (2019), Gaganis et al. (2019), and Yin et al. (2020).

Size: Size is one of the essential control variables in most similar studies [e.g., Michaelas et al. (1999), Chui et al. (2002), Baxamusa and Jalal (2014), Verduch Arosa et al. (2014), Jiang et al. (2015), Adhikari and Agrawal (2016), Chui et al. (2016), Mourousidou-Damtsa et al. (2019), Diez-Esteban et al. (2019), Li et al. (2019), Papageorgiou et al. (2020), Czerwonka and Jaworski (2021), and Rashid et al. (2021)]. The size of a company can be measured with three different variables. Firstly, the firm's total revenue, secondly, by the number of total assets, and third by the number of employees, as in this present study.

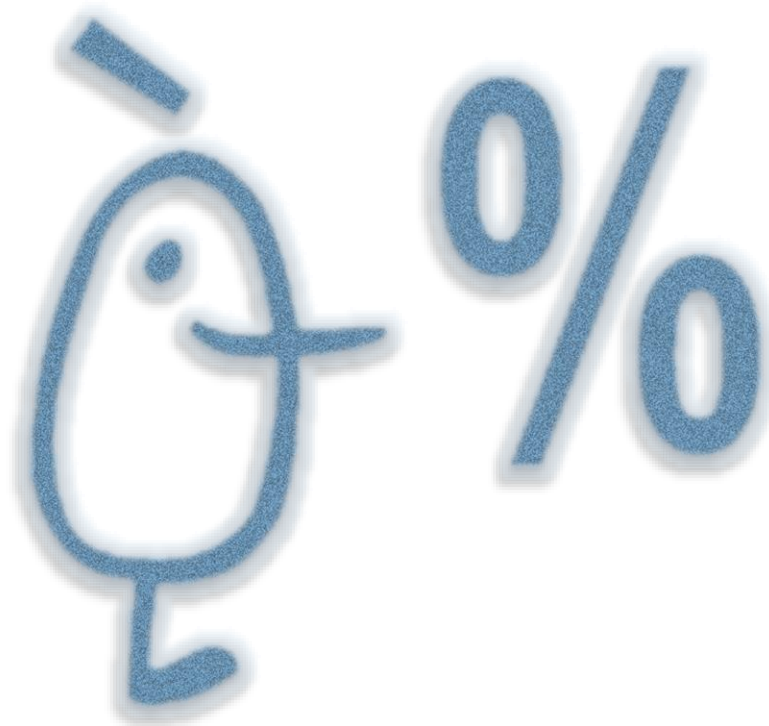
The second part of the control variables are the national level variables. These variables include due to the small size at the country level (N=24), only one variable, which is:

Median Income: The per capita income was a variable in different studies (Baxamusa and Jalal (2014), Adhikari and Agrawal (2016), He and Hu (2016), and Cai and Shi (2017)). Therefore, it might influence the invested amount of equity in firms and could affect the model.

⁵⁹ The study of Hilary and Hu (2009) laid the argumentative foundation for later studies and the use of organizational and institutional variables. Citing studies are, among others: Adhikari and Agrawal (2016), Cai and Shi (2017), and Diez-Esteban et al. (2019).

Table 30: Overview of the Control Variables; Source: Authors' compilation

Variable	Short Version	Year	Source of Data	Articles
Number of Employees / Size	X1	2015-2019	ORBIS®	<ul style="list-style-type: none"> • Michaelas et al. (1999) • Chui et al. (2002) • Verduch Arosa et al. (2014) • Baxamusa and Jalal (2014) • Jiang et al. (2015) • Adhikari and Agrawal (2016) • Chui et al. (2016) • Mourousidou-Damtsa et al. (2019) • Diez-Esteban et al. (2019) • Li et al. (2019) • Papageorgiou et al. (2020) • Rashid et al. (2020) • Czerwonka and Jaworski (2021)
Return on Assets	X2			<ul style="list-style-type: none"> • Adhikari and Agrawal (2016) • Chen et al. (2016) • Chui et al. (2016) • He and Hu (2016) • Cai and Shi (2017) • Mourousidou-Damtsa et al. (2019) • Gaganis et al. (2019) • Yin et al. (2020)
Median Income	Cj5	2017	(Bildung, 2019)	<ul style="list-style-type: none"> • Baxamusa and Jalal (2014) • Adhikari and Agrawal (2016) • He and Hu (2016) • Cai and Shi (2017)



CHAPTER 5

RESULTS ANALYSIS AND DISCUSSION

5 RESULTS ANALYSIS AND DISCUSSION

This chapter will focus on the result analysis and its discussion. It begins with the descriptive analysis of the dependent, independent, and control variables, followed by the multilevel regression analysis with the test of the various control variables. The last part will finish with a worthy discussion part and the attempt to answer the main research question of whether religion and culture influence the capital structure of a firm or not, and if the risk of a firm is impacted by culture or religion.

5.1 Descriptive Analysis

The selection of the individual data had four different levels. The first and most important data was the firm-level data, collected in March 2021 in the ORBIS[®] database.⁶⁰ The collected dataset from Small- and Medium-Sized Firms, following Dasí et al. (2015), Dolz et al. (2019), and Iborra et al. (2022), within Europe working in the manufacturing business included the following variables for each year from 2015 to 2019:

- EQU = Equity
- REV = Revenue
- ASS = Assets
- PRO = Profit
- EMP = Number of Employees

In a second step, the following variables were calculated for each year from 2015 to 2019:

- Leverage
- Total Debt Ratio
- Return on Assets
- Return on Equity

Followed, by the calculation of the Standard Deviation for the individual yearly data of the Return on Equity, which lead to the variable:

- Standard Deviation of Return on Equity

⁶⁰ ORBIS[®] is an online database compiled by Bureau Van Dijk – A Moody's Analytics Company

Afterwards the median of the available data for each firm was calculated for each individual variable, which lead to an average observation of the collected time frame. This led to average data for:

- Amount of Employees
- Return on Assets

Moreover, and with the average data the following variables were calculated:

- Debt to Assets
- Debt to Revenue

The second part dealt with collecting of the first independent variables, the culture variables, and their main models. All cultural variables were collected between January and February 2021. The data was collected on these three databases for cultural data:

1. Hofstede (2021)
2. Schwartz (2008)
3. GLOBE (2020)

The goal was to collect the data for all of the 27 European countries. However, since the firm level data was only available for firms in 24 European countries, the data from Hofstede was available for all 24 European countries, Schwartz only had data for 23 countries, and GLOBE Study the least amount of data with only 16 European countries. Schwartz did not have available data for Lithuania, in contrast to GLOBE Study which did not have any data available for Belgium, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Romania, and Slovakia.

The third part dealt with the religious level data as a second independent variable, collected between January and February 2021. Following prior research (Adhikari & Agrawal, 2016), the data displayed the religious affiliation, from 2015 and was collected from the database BPB (2019). In addition, parts of their data come from the Swiss Metadata base of Religious Affiliation in Europe (SMRE) (Liedhegener & Odermatt, 2019). The religious data was available for all needed European countries and grouped into two parts. Firstly, the percentages of Christians, and secondly the individual percentage of the Christian religions, on the one hand Catholics, and on the other hand Protestants. This study excluded the data for “other” religions such as Jude’s, Muslims, and Eastern religions.

The fourth part dealt with collecting they control variable for the national data, which was following the mainly used variables in the primary literature, as individually described in the

last part. The variable was collected on in February 2021. In the BPB (2021) database and was available for all 24 European Countries.

The following section will give insides on the various variables and their descriptive statistics. Firstly, the firm variables will be presented, followed by, secondly, the cultural and religious independent variables, and thirdly, all of the individual control variables.

5.1.1 Dependent Variables

The dependent variables are represented through three different individual firm variables. Since these current study uses various ratios, and these ratios are calculated with different other variables, the descriptive statistics of these variables are presented in the appendix.⁶¹

Table 31 provides the main descriptive statistics of the three dependent variables and Table 32 provides the correlations between them.

Debt to Asset Ratio (Y1): The debt to assets ratio was first calculated with the level of debt and the total level of assets. As described before was the level of debt calculated as well. The variables were also collected in March 2021 in the ORBIS[®] database.⁶² After calculating the debt to assets, the mean is 0.5664, a minimum of 0.01, and a maximum of 8.10.

Debt to Revenue (Y2): The debt to revenue ratio was first calculated with the level of debt and the level of revenue. As described before was the level of debt calculated as well. The variables were also collected in March 2021 in the ORBIS[®] database.⁶³ After calculating the debt to revenue, the mean is 0.4795, a minimum of 0.01, and a maximum of 9.93.

Standard Deviation of Return on Equity (Y3): The SD (Standard Deviation) of ROE (Return on Equity) is the third dependent variable. It was calculated with the profit and amount of equity. The variables were also collected in March 2021 in the ORBIS[®] database.⁶⁴ After calculating the standard deviation of return on equity, the mean is 0.3812, a minimum of 0.0001, and a maximum of 96.82.

⁶¹ Table 79 and Table 80

⁶² ORBIS[®] is an online database compiled by Bureau Van Dijk – A Moody's Analytics Company

⁶³ ORBIS[®] is an online database compiled by Bureau Van Dijk – A Moody's Analytics Company

⁶⁴ ORBIS[®] is an online database compiled by Bureau Van Dijk – A Moody's Analytics Company

Table 31: Descriptive Statistics of Firm Level Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Debt to Assets	30081	8.09	0.01	8.10	0.5664	0.00167	0.28950	0.084	3.980	0.014	67.840	0.028
Debt to Revenue	25981	9.93	0.01	9.94	0.4795	0.00263	0.42472	0.180	5.593	0.015	64.723	0.030
SD ROE	25819	96.82	0.00	96.82	0.3812	0.01583	2.54344	6.469	20.875	0.015	558.671	0.030

Table 32: Pearson Correlation of Firm Level Data; Source: Authors' compilation

Variable	1.	2.
1. Debt to Assets		
	Pearson Correlation	
	Sig. (2-tailed)	30081
	N	.448**
2. Debt to Revenue		
	Pearson Correlation	0.000
	Sig. (2-tailed)	25978
	N	.147**
3. SD ROE		
	Pearson Correlation	0.000
	Sig. (2-tailed)	25817
	N	23655

**p<.01

5.1.2 Independent Variable

The independent variables are divided into two parts. Firstly, the cultural level variables, and secondly, the religious variables. Within the cultural variables, there appear, as described before, for robustness checks, three different data collections. All of the variables are portrayed in the following section including the individual variables and their numbers for each country.

5.1.2.1 Cultural Level Data

5.1.2.1.1 Hofstede Variables

The cultural values of Hofstede were taken from the official website of Hofstede Insights in January (2021). Hofstede's variables were only available for 26 European countries. The data for Cyprus was missing. However, since Cyprus and Malta were excluded from the dataset caused by missing Industry Level data, the final data included only 25 European countries. In the beginning, all following six Hofstede Variables were collected:

- Cj3 = Individualism, with an average of 57.40, a median of 60, a minimum, in Slovenia, of 27, and a maximum, in Hungary and the Netherlands, of 100.
- Cj4 = Uncertainty Avoidance, with an average of 71, a median of 74, a minimum, in Denmark, of 23, and a maximum, in Greece, of 100.
- Cj6 = Power Distance, with an average of 51.92, a median of 50, a minimum, in Austria, of 11, and a maximum, in Slovakia, with 100.
- Cj7 = Masculinity, with an average of 45.16, a median of 42, a minimum, in Sweden, of 5, and a maximum, in Slovakia, of 100.
- Cj8 = Long Term Orientation, with an average of 58.20, a median of 60, a minimum, in Ireland, of 24, and a maximum, in Germany, of 83.
- Cj9 = Indulgence, with an average of 41.52, a median of 40, a minimum, in Latvia, of 13, and a maximum, in Sweden, of 78.

The individual data of each country will be further displayed in the appendix⁶⁵. Table 33 provides the descriptive statistics for Hofstede data and the six dimensions.

Table 34 provides the Pearson correlations of the six dimensions of Hofstede in the data set.

⁶⁵ Table 72

Table 33: Descriptive Statistics of Hofstede Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Power Distance	32.197	89	11	100	50.40	0.096	17.144	293.929	0.296	0.014	-0.047	0.027	
Individualism	32.197	53	27	80	61.31	0.096	16.687	278.459	-1.021	0.014	-0.301	0.027	
Masculinity	32.197	95	5	100	53.52	0.112	20.077	403.079	-0.676	0.014	-0.335	0.027	
Uncertainty Avoidance	32.197	77	23	100	74.58	0.088	15.782	249.082	-1.052	0.014	1.859	0.027	
Long Term Orientation	32.197	59	24	83	62.70	0.090	16.202	262.512	-0.354	0.014	-0.605	0.027	
Indulgence	32.197	65	13	78	38.00	0.079	14.240	202.785	0.846	0.014	0.702	0.027	

Table 34: Pearson Correlation of Hofstede; Source: Authors' compilation

Variable	1.	2.	3.	4.	5.
1. Power Distance	Pearson Correlation Sig. (2-tailed)				
2. Individualism	Pearson Correlation Sig. (2-tailed)	-.580** 0.000			
3. Masculinity	Pearson Correlation Sig. (2-tailed)	-.205** 0.000	.411** 0.000		
4. Uncertainty Avoidance	Pearson Correlation Sig. (2-tailed)	.769** 0.000	-.507** 0.000	.175** 0.000	
5. Long Term Orientation	Pearson Correlation Sig. (2-tailed)	-.381** 0.000	.404** 0.000	.348** 0.000	-.310** 0.000
6. Indulgence	Pearson Correlation Sig. (2-tailed)	-.512** 0.000	.315** 0.000	-.281** 0.000	-.524** 0.000

** $p < .01$

5.1.2.1.2 Schwartz Variables

The cultural values of Schwartz (2008) were taken from the official ResearchGate website of Shalom Schwartz in January 2021. Schwartz's variables were only available for 24 European countries. The data for Lithuania, Luxembourg, and Malta was missing. However, since Cyprus was excluded from the dataset caused by missing Industry Level data, the final data included only 23 European countries. In the beginning, all following seven Schwartz Variables were collected:

- Cj11 = Harmony, with an average of 4.28, a median of 4.31, a minimum, in Ireland, of 3.77, and a maximum, in Germany and Italy, of 4.62.
- Cj12 = Embedded, with an average of 3.49, a median of 3.43, a minimum, in Germany, of 3.03, a maximum, in Croatia, of 4.00.
- Cj13 = Hierarchy, with an average of 1.98, a median of 1.89, a minimum, in Italy, of 1.60, and a maximum, in Bulgaria, of 2.68.
- Cj14 = Mastery, with an average of 3.88, a median of 3.84, a minimum, in Finland, of 3.66, and a maximum, in Greece, of 4.25.
- Cj15 = Affective Autonomy, with an average of 3.77, a median of 3.72, a minimum, in Slovakia, of 2.99, and a maximum, in France, of 4.39.
- Cj16 = Intellectual Autonomy, with an average of 4.65, a median of 4.62, a minimum, in Latvia, of 4.22, and a maximum, in France, of 5.13.
- Cj17 = Egalitarian Commitment, with an average of 4.79, a median of 4.89, a minimum, in Bulgaria, of 4.13, and a maximum, in Italy, of 5.27.

The individual data of each country will be further displayed in the appendix⁶⁶ and a general overview over the Schwartz data, will be shown Table 35 and Table 36.

⁶⁶ Table 73

Table 35: Descriptive Statistic of Schwartz Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Harmony	31.661	0.85	3.77	4.62	4.40	0.001280	0.227857	0.052	0.014	-0.715	0.014	-0.524	0.028
Embedded	31.661	0.97	3.03	4.00	3.71	0.00158	0.28186	0.079	0.014	0.398	0.014	-0.912	0.028
Hierarchy	31.661	1.08	1.60	2.68	1.91	0.001539	0.27396	0.075	0.014	1.287	0.014	1.348	0.028
Mastery	31.661	0.59	3.66	4.25	3.86	0.000637	0.113365	0.013	0.014	1.044	0.014	0.701	0.028
Affective Autonomy	31.661	1.40	2.99	4.39	3.76	0.002081	0.370391	0.137	0.014	0.110	0.014	-1.50	0.028
Intellectual Autonomy	31.661	0.91	4.22	5.13	4.80	0.001402	0.24950	0.062	0.014	-0.888	0.014	-0.439	0.028
Egalitarian Commitment	31.661	1.14	4.13	5.27	4.95	0.00184	0.32745	0.107	0.014	-1.027	0.014	-0.160	0.028

Table 36: Pearson Correlation of Schwartz; Source: Authors' compilation

Variable	1.	2.	3.	4.	5.	6.
1. Harmony						
	Pearson Correlation					
2. Embedded						
	Sig. (2-tailed)					
	Pearson Correlation	-.590**				
	Sig. (2-tailed)	0.000				
3. Hierarchy						
	Pearson Correlation	-.731**	.442**			
	Sig. (2-tailed)	0.000	0.000			
4. Mastery						
	Pearson Correlation	-.370**	.252**			
	Sig. (2-tailed)	0.000	0.000			
5. Affective Autonomy						
	Pearson Correlation	.052**	.074**	-.052**		
	Sig. (2-tailed)	0.000	0.000	0.000		
6. Intellectual Autonomy						
	Pearson Correlation	.666**	-.571**	-.487**	.475**	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
7. Egalitarian Commitment						
	Pearson Correlation	.653**	-.757**	-.217**	.136**	.712**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000

** $p < .01$

5.1.2.1.3 GLOBE Study Variables

The cultural values of GLOBE Study (2020) were taken from the official website of the GLOBE Study Project in February 2021. The GLOBE Study variables were only available for 16 large European countries. The data for these eleven European Countries was missing: Belgium, Bulgaria, Croatia, Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Romania, and Slovakia. Therefore, the final data included only 16 European countries. In the beginning, all following eight “Practices” GLOBE Study Variables, all following eight “Values” GLOBE Study Variables, and the available GLOBE Study country clusters were collected. Since the country cluster was not available for all 16 European countries, it is not further mentioned. The following cultural values were individually collected:

- Cj20 = Uncertainty Avoidance Societal Practices, with an average of 4.34, a median of 3.37, a minimum, in Hungary, of 3.12, and a maximum, in Sweden, of 5.32.
- Cj21 = Future Orientation Social Practices, with an average of 3.83, a median of 3.67, a minimum, in Poland, of 3.11, and a maximum, in the Netherlands, of 4.61.
- Cj22 = Power Distance Social Practices, with an average of 4.98, a median of 5.20, a minimum, in Czech Republic, of 3.59, and a maximum, in Hungary, of 5.56.
- Cj23 = Collectivism I Societal Practices, with an average of 4.14, a median of 4.03, a minimum, in Greece, of 3.25, and a maximum, in Sweden, of 5.22.
- Cj24 = Human Orientation Societal Practices, with an average of 3.80, a median of 3.76, a minimum, in Germany, of 3.18, and a maximum, in Ireland, of 4.96.
- Cj25 = Performance Orientation Societal Practices, with an average of 3.92, a median of 3.95, a minimum, in Greece, of 3.20, and a maximum, in Austria, of 4.44.
- Cj26 = Collectivism II Societal Practices, with an average of 4.62, a median of 4.90, a minimum, in Czech Republic, of 3.18, and a maximum, in Poland, of 5.52.
- Cj27 = Gender Egalitarianism Societal Practices, with an average of 3.56, a median of 3.57, a minimum, in Spain, of 3.01, and a maximum, in Hungary, of 4.08.
- Cj28 = Assertiveness Societal Values, with an average of 4.11, a median of 4.07, a minimum, in Spain, of 3.38, and a maximum, in Hungary, of 4.79.
- Cj30 = Uncertainty Avoidance Societal Values, with an average of 4.16, a median of 4.14, a minimum, in the Netherlands, of 3.24, and a maximum, in Greece, of 5.09.
- Cj31 = Future Orientation Societal Values, with an average of 5.06, a median of, 5.15, a minimum, in Czech Republic, of 2.95, and a maximum, in Italy, of 5.91.

- Cj32 = Power Distance Societal Values, with an average of 2.66, a median of 2.52, a minimum, in Finland, of 2.19, and a maximum, in Czech Republic, of 4.35.
- Cj33 = Collectivism I Societal Values, with an average of 4.61, a median of, 4.57, a minimum, in Czech Republic, of 3.85, and a maximum, in Greece, of 5.40.
- Cj34 = Human Orientation Societal Values, with an average of 5.36, a median of 5.47, a minimum, in Czech Republic, of 3.39, and a maximum, in Finland, of 5.81.
- Cj35 = Performance Orientation Societal Values, with an average of 5.73, a median of 5.97, a minimum, in Czech Republic, of 2.35, and a maximum, in Slovenia, of 6.41.
- Cj36= Collectivism II Societal Values, with an average of 5.48, a median of 5.52, a minimum, in Czech Republic, of 4.06, and a maximum, in Sweden, of 6.04.
- Cj37 = Gender Egalitarianism Societal Values, with an average of 4.76, a median of 4,86, a minimum, in Czech Republic, 3.78, and a maximum, in Sweden, of 5.15.
- Cj38 = Assertiveness Societal Values, with an average of 3.58, a median of 3.59, a minimum, in Austria, of 2.81, and a maximum, in Slovenia, of 4.59.

The individual data of each country will be further displayed in the appendix ⁶⁷ and a general overview over the GLOBE Study Practices and Values data, will be shown in Table 37 and Table 38.

⁶⁷ Table 74 and Table 75

Table 37: Descriptive Statistic of GLOBE Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Uncertainty Avoidance Societal Practices	26.682	2.2059	3.1159	5.3218	4.4040	0.0043	0.70310	0.494	0.012	0.015	-1.499	0.030	
Future Orientation Societal Practices	26.682	1.5081	3.1055	4.6136	3.7690	0.0029	0.4886	0.239	0.174	0.015	-1.626	0.030	
Power Distance Social Practices	26.682	1.9694	3.5887	5.582	5.1913	0.0027	0.44526	0.198	-2.460	0.015	5.416	0.030	
Collectivism I Societal Practices	26.682	1.9779	3.2458	5.2237	3.9180	0.0023	0.38466	0.148	1.797	0.015	2.942	0.030	
Human Orientation Societal Practices	26.682	1.7744	3.1812	4.9557	3.5364	0.0020	0.34011	0.116	1.008	0.015	1.103	0.030	
Performance Orientation Societal Practices	26.682	1.2360	3.2041	4.4401	3.9312	0.0019	0.31888	0.102	-0.229	0.015	-1.416	0.030	
Collectivism II Societal Practices	26.682	2.3418	3.1791	5.529	4.5858	0.0041	0.67855	0.460	-0.153	0.015	-1.202	0.030	
Gender Egalitarianism Societal Practices	26.682	1.0684	3.0078	4.0762	3.3723	0.0020	0.33837	0.115	0.812	0.015	-0.770	0.030	
Assertiveness Societal Practices	26.682	1.4092	3.3759	4.7852	4.2290	0.0021	0.351801	0.124	-0.499	0.015	-0.550	0.030	
Uncertainty Avoidance Societal Values	26.682	1.848	3.2448	5.09333	4.0417	0.0035	0.58719	0.345	-0.140	0.015	-1.611	0.030	
Future Orientation Societal Values	26.682	2.9616	2.9520	5.9137	5.2092	0.0037	0.61776	0.382	-1.430	0.015	3.749	0.030	
Power Distance Societal Values	26.682	2.1667	2.18787	4.35458	2.59148	0.002320	0.3789925	0.144	3.532	0.015	13.546	0.030	
Collectivism I Societal Values	26.682	1.54930	3.85138	5.40069	4.813	0.002385	0.389693	0.152	-0.931	0.015	0.110	0.030	
Human Orientation Societal Values	26.682	2.4130	3.3937	5.80681	5.4408	0.002522	0.412092	0.170	-4.211	0.015	18.231	0.030	
Performance Orientation Societal Values	26.682	4.0611	2.3479	6.40903	5.85975	0.004245	0.69343	0.481	-4.478	0.015	19.918	0.030	
Collectivism II Societal Values	26.682	1.9766	4.0625	6.03919	5.47361	0.002360	0.38564	0.189	-1.506	0.015	3.718	0.030	
Gender Egalitarianism Societal Values	26.682	1.3715	3.7764	5.14800	4.80625	0.0016612	0.27135	0.074	-2.079	0.015	5.116	0.030	
Assertiveness Societal Values	26.682	1.7745	2.8119	4.58651	3.51126	0.0024083	0.39338	0.155	0.130	0.015	-0.998	0.030	

Table 38: Pearson Correlation of GLOBE; Source: Authors' compilation

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Uncertainty Avoidance Societal Practices																	
2. Future Orientation Societal Practices	.926**																
3. Power Distance Societal Practices	-.358**	-.398**															
4. Collectivism I Societal Practices (Institutional Collectivism)	.328**	.389**	-.415**														
5. Humane Orientation Societal Practices	-.195**	-.092**	-.565**	.526**													
6. Performance Orientation Societal Practices	.819**	.759**	-.397**	.213**	-.279**												
7. Collectivism II Societal Practices	-.802**	-.713**	-.666**	-.200**	-.017**	-.614**											
8. Gender Egalitarianism Societal Practices	-.384**	-.290**	-.339**	.381**	-.527**	-.373**	.100**										
9. Assertiveness Societal Practices	.199**	.230**	.332**	-.459**	-.818**	-.405**	-.026**	-.464**									
10. Uncertainty Avoidance Societal Values	-.923**	-.889**	-.420**	-.165**	.211**	-.765**	.865**	.331**	-.274**								
11. Future Orientation Societal Values	-.617**	-.555**	.774**	-.198**	-.134**	-.636**	.766**	-.172**	-.057**	.637**							
12. Power Distance Societal Values	.057**	-.066**	-.712**	.062**	.355**	.177**	-.429**	.449**	-.330**	-.160**	-.746**						
13. Collectivism I Societal Values (Institutional Collectivism)	-.313**	-.309**	.722**	-.595**	-.387**	-.275**	.543**	-.580**	.224**	.343**	.667**	-.660**					
14. Human Orientation Societal Values	-.003	-.003	.705**	.140**	-.345**	-.108**	.380**	-.335**	.265**	.175**	.717**	-.882**	.481**				
15. Performance Orientation Societal Values	-.067**	-.003	.753**	.081**	-.330**	-.200**	.485**	-.231**	.236**	.164**	.726**	-.863**	.513**	.884**			
16. Collectivism II Societal Values (In-group Collectivism)	-.499**	-.432**	.618**	.247**	.148**	-.611**	.728**	.108**	-.303**	.649**	.825**	-.642**	.431**	.699**	.713**		
17. Gender Egalitarianism Societal Values	.149**	.291**	.417**	.157**	-.074**	-.093**	.190**	-.329**	.062**	-.091**	.493**	-.738**	.476**	.612**	.737**	.575**	
18. Assertiveness Societal Values	-.657**	-.716**	.025**	.003	.457**	-.555**	.473**	.254**	-.584**	.719**	.275**	-.236**	.008	-.213**	-.243**	.360**	-.276**
	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.180	0.000	0.000	0.000	0.000	0.000

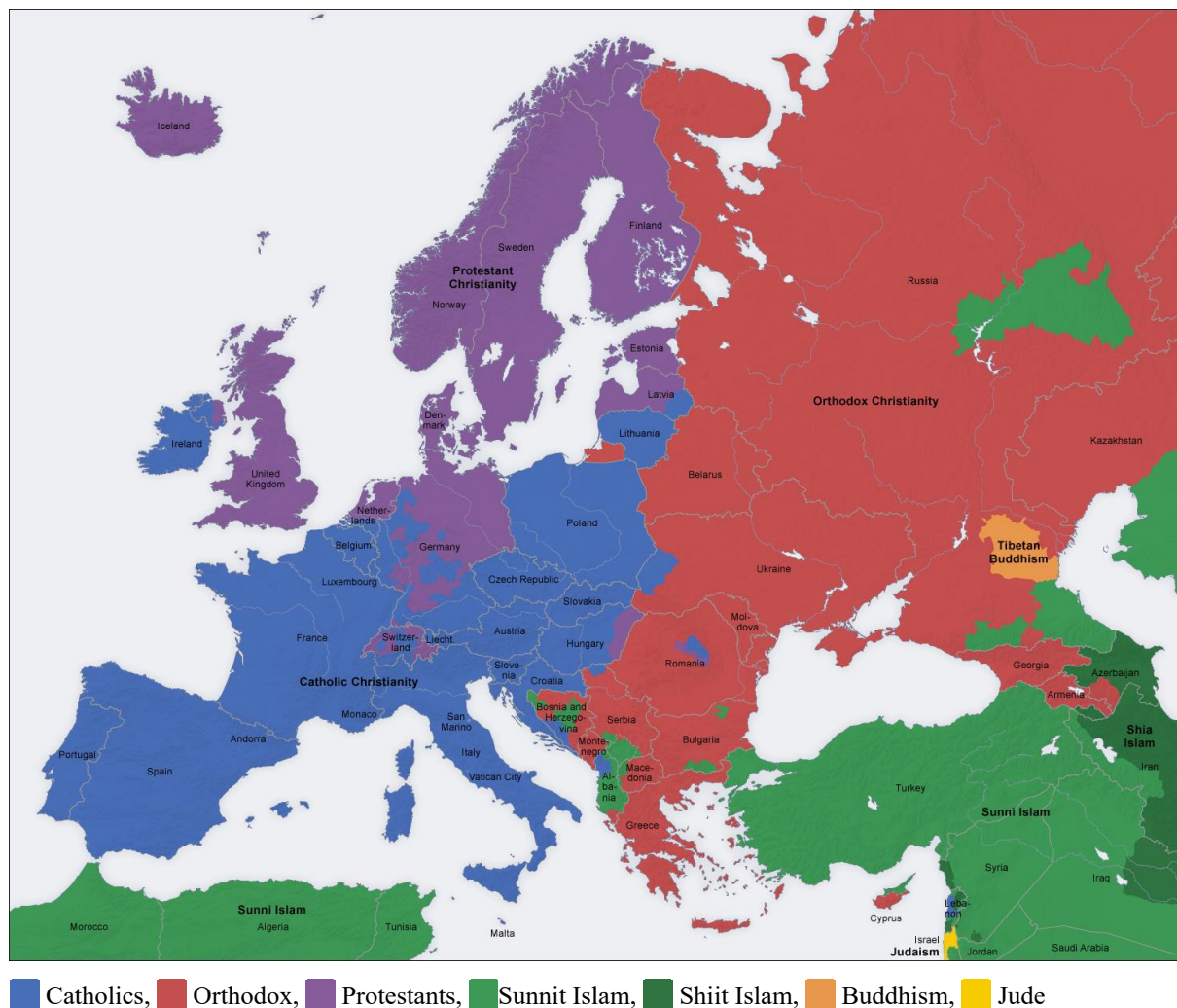
**p<.01

5.1.2.2 Religious Variables

The religious level data was collected between January and February 2021. The data displayed the religious affiliation from 2015 and was collected from the database BPB (2019)⁶⁸. Parts of their data come from the Swiss Metadata base of Religious Affiliation in Europe (SMRE) (Liedhegener & Odermatt, 2019).

The following figures present an overview over the dominant religion of each country and the level of individuals believing in God. This study follows the first approach with religious affiliation, as discussed above.⁶⁹

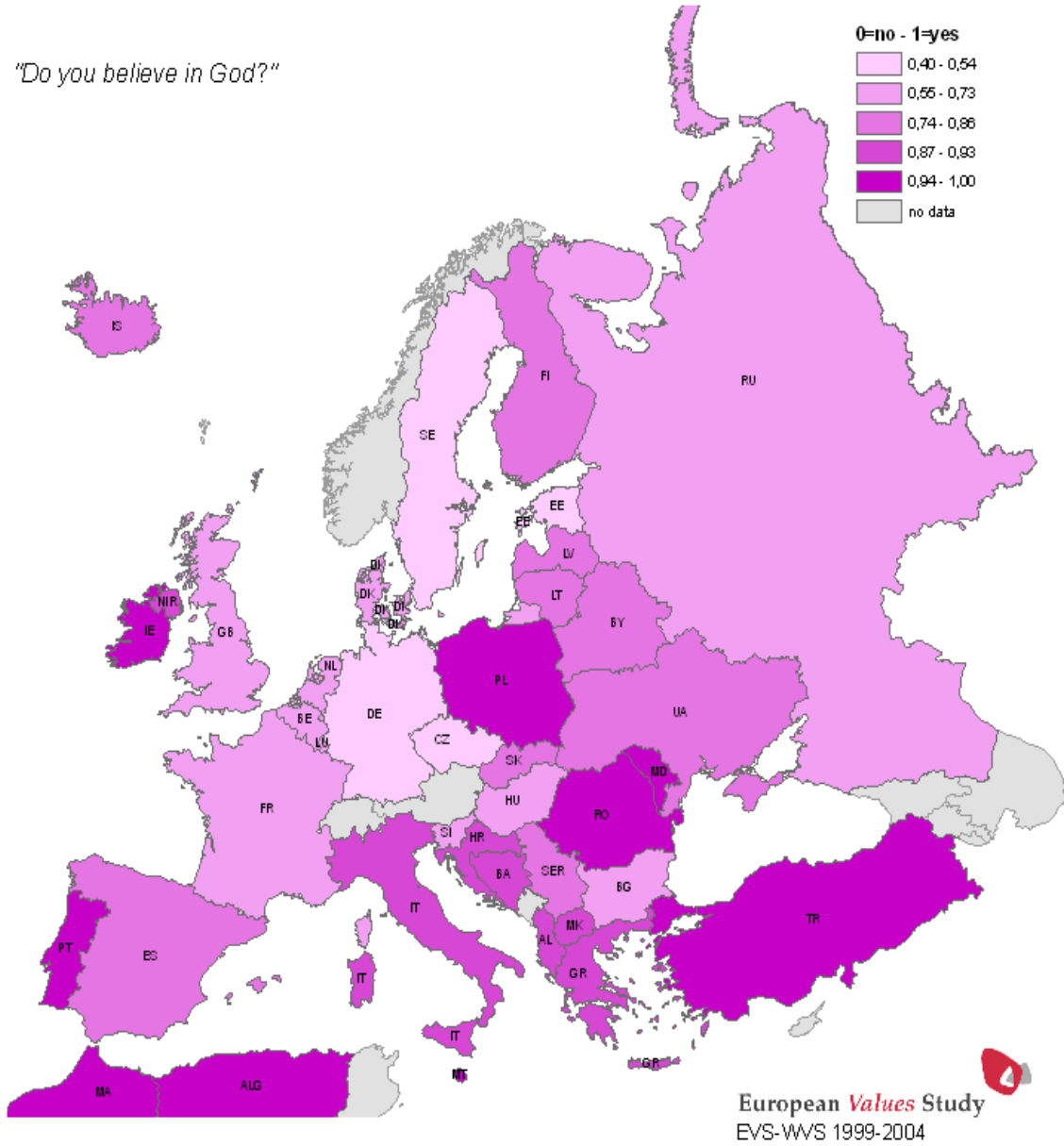
Figure 12: Map of Europe and the dominant Religion of each country; Source: Brooks (2021)



⁶⁸ <https://www.bpb.de/nachschlagen/zahlen-und-fakten/europa/70539/themengrafik-religionszugehoerigkeit>

⁶⁹ 4.2.2.2 Religious Variables

Figure 13: Map of Europe and level of believing in God; Source: Brooks (2021)



The religious data for all European countries was available and grouped into three main information's. Firstly, the predominant religion in the Country, secondly the percentages of Christians, thirdly the individual percentage of the individual Christian religions, Catholics and Protestants. However, since three were excluded from the dataset caused by missing firm-level data, the final data included only 24 European countries.

- Cj0 = Percentage of Christians, with an average of 71.27%, a median of 78.10%, a minimum, in the Czech Republic, of 27.10%, and a maximum, in Romania, of 97.00%.
- Cj1 = Percentage of Catholics, with an average of 46.26%, a median of 50.00%, minimum, in Bulgaria, of 0.40%, and a maximum, in Poland, of 96.00%.
- Cj2 = Percentage of Protestants, with an average of 14.24%, a median of 3.80%, a minimum, in Greece, of 0.20%, and a maximum, in Finland, of 74.80%.

The individual data of each country will be further displayed in the appendix⁷⁰ and a general overview, will be shown in Table 39 and Table 40.

⁷⁰ Table 76

Table 39: Descriptive Statistic of Religion Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Christians	32.197	69.9%	27.1%	97.0%	71.742%	0.0987%	17.7038%	313.424	-490	0.014	-459	0.027	
Catholic	32.197	95.6%	0.4%	96.0%	48.595%	0.1722%	30.9077%	955.286	-005	0.014	-1.382	0.027	
Protestant	32.197	74.6%	0.2%	74.8%	13.659%	0.0989%	17.7464%	314.936	1.609	0.014	2.513	0.027	

Table 40: Pearson Correlation of Religion; Source: Authors' compilation

Variable	1.		2.	
Christians	Pearson Correlation			
	Sig. (2-tailed)			
Catholic	Pearson Correlation	.452**		
	Sig. (2-tailed)	0.000		
Protestant	Pearson Correlation	-.231**		
	Sig. (2-tailed)	0.000		

** $p < .01$

5.1.3 Control Variables

The first part of the control variables deals with the two firm level Control Variables, which have been used. These two variables, are:

X1 = Amount of Employees: The amount of employees was collected with the main data collection for the firm-level data, collected in March 2021 in the ORBIS® database.⁷¹ The mean amount of employees within the tested firms is 107.56, a minimum of 40.20, and a maximum of 267.

X2 = Return on Assets: The Return on Assets (ROA) is first calculated with assets and profit data. The amount of assets and profit was collected with the main data collection for the firm-level data, collected in March 2021 in the ORBIS® database.⁷² After calculating the ROA, the mean within the tested firms is 5.05%, with a minimum of -287.90%, and a maximum of 201.36%.

Table 38 and 39 provide an overview of the descriptive statistics and of the correlations.

The second part of the control variables are the national-level data variables

Cj5 = Median Income: The median income data is from 2017 (Bildung, 2019). It might have an influence on the invested amount of equity in firms and could influence the model. The median income within the tested countries is 14.940,68€, with a median of 12.713,00€, a minimum of 2.742,00€ in Romania, and a maximum of 36.076,00€ in Luxembourg. The individually collected data is further displayed in the appendix.⁷³

Table 41, Table 42, and Table 43 provide an overview of the descriptive statistics and correlations.

⁷¹ ORBIS® is an online database compiled by Bureau Van Dijk – A Moody’s Analytics Company

⁷² ORBIS® is an online database compiled by Bureau Van Dijk – A Moody’s Analytics Company

⁷³ Table 77

Table 41. Descriptive Statistics of complete Firm Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Amount of Employees	32197	226.80	40.20	267.00	107.56	.26	46.65	2176.64	.928	-.014	-.036	.027	
ROA	27783	489.26%	-287.90%	201.36%	5.05%	0.06%	10.55%	111.43	-3.34	-.01	106.72	.029	

Table 42: Pearson Correlation of complete Firm Data; Source: Authors' compilation

Variable	
1.	1.
Amount of Employees	Pearson Correlation Sig. (2-tailed)
2.	
ROA	Pearson Correlation Sig. (2-tailed)

** $p < .01$

Table 43: Descriptive Statistic of Country level Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
					Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
Median Income	32.197	33334.0	2742.0	36076.0	15693.631	41.2541	7402.4463	54796210.9	-0.385	0.014	-1.158	0.027

5.2 Multilevel Regression Analysis

The analytical strategy was based on the uniqueness of the dataset of this study, representing variables from the organizational level as well as variables from the country level.

Prior research implied three different statistical methods. Firstly, the ordinary least squares (OLS) estimation (Hilary and Hui (2009); Jiang et al. (2015); Adhikari and Agrawal (2016); He and Hu (2016)). Secondly, a country-weighted least square regression to control for differential country representations in the sample (Froot (1989), Edwards (1992), Williams (2000), Dragolov and Boehnke (2015), and Chen et al. (2016)). Lastly, and due to the kind of data, organizational data on the one hand (Level 1), and institutional data on the other hand (Level 2), the multilevel regression (Hayward and Kimmelmeier (2011), Donati et al. (2016), Chen et al. (2018), and Molina-Azorin et al. (2020)).

Therefore, and due to the similarity of the data, in a multilevel structure, where firms are nested within different countries, to other studies, this study employed multilevel analysis through hierarchical linear modeling to test the proposed hypotheses because this technique can simultaneously account for the variances from different levels and provide more accurate estimates on the cross-level effects (Hofmann & Gavin, 1998).

The country and firm independent and control variables have been entered centered. The decision to use centering at the grand mean (CGM) or centering within cluster (CWC) cannot be based on statistical evidence but depends heavily on one's substantive research questions (Enders & Tofighi, 2007, pp. 134-135). Thus, in accordance with the hypotheses, GMC centering for level 2 (country) variables and CWC centering for level 1 (firm) variables were used.

Due to the small sample size at the country level (N=24), which limits the testing of models with many predictors, this study tested the hypotheses with simple models, only including the control variables and those of the hypothesis tested in each case. Three different dependent variables have been used, to test them individually with the various control variables. These variables are presented in the tables below.

Table 44: Dependent, Independent, and Control Variables; Source: Authors' compilation

Dependent Variables		Independent Variables - Religion	
Y1	Debt to Assets	Cj0	Percentage of Christians
Y2	Debt to Revenue	Cj1	Percentage of Catholics
Y3	SD of Return on Equity	Cj2	Percentage of Protestants
Control Variables - Firm Level		Independent Variables - Hofstede	
X1	Number of Employees	Cj3	Individualism
X2	Return on Assets	Cj4	Uncertainty Avoidance
		Cj6	Power Distance
Control Variables - National Level		Cj7	Masculinity
Cj5	Median Income	Cj8	Long Term Orientation
		Cj9	Indulgence

Table 45: Additional Independent Variables; Source: Authors' compilation

Independent Variables - Schwartz		Independent Variables - GLOBE	
Cj10	Harmony	Cj20	Uncertainty Avoidance Societal Practices
Cj11	Embedded	Cj21	Future Orientation Social Practices
Cj12	Hierarchy	Cj22	Power Distance Social Practices
Cj13	Mastery	Cj23	Collectivism I Societal Practices
Cj14	Affective Autonomy	Cj24	Humane Orientation Societal Practices
Cj15	Intellectual Autonomy	Cj25	Performance Orientation Societal Practices
Cj16	Egalitarian Commitment	Cj26	Collectivism II Societal Practices
		Cj27	Gender Egalitarianism Societal Practices
		Cj28	Assertiveness Societal Values
		Cj30	Uncertainty Avoidance Societal Values
		Cj31	Future Orientation Societal Values
		Cj32	Power Distance Societal Values
		Cj33	Collectivism I Societal Values
		Cj34	Human Orientation Societal Values
		Cj35	Performance Orientation Societal Values
		Cj36	Collectivism II Societal Values
		Cj37	Gender Egalitarianism Societal Values
		Cj38	Assertiveness Societal Values

5.2.1 Results

The descriptive statistics and correlations of the variables at the individual level are presented in the following tables.

Table 46: Descriptives and Correlations I – Hofstede; Source: Authors' compilation

Variable	N	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. Y1_Debt_to_Assets	30081	0.566	0.289														
2. Y2_Debt_to_Revenue	25981	0.480	0.425	.448**													
3. Y3_SD_ROE	25819	0.381	2.543	.147**	.085**												
4. Cj0_Christians	32196	71.742	17.704	.049**	.142**	.031**											
5. Cj1_Protestatism	32196	13.660	17.747	.003	.130**	.023**	.231**										
6. Cj2_Catholic	32196	48.595	30.908	.054**	.133**	.034**	.452**	.468**									
7. Cj3_Individualism	32196	61.307	16.687	.060**	.009	.008	.342**	.278**	.182**								
8. Cj4_Uncertainty_Avoidance	32196	74.583	15.783	.023**	.070**	.025**	.269**	.756**	.347**	.507**							
9. Cj5_Median_Income_Countrylevel	32196	15692.998	7401.690	.101**	.015*	.022**	.378**	.539**	.059**	.609**	.637**						
10. Cj6_Power_Distance	32196	50.401	17.145	.042**	.035**	-.011	.307**	.608**	.050**	.580**	.769**	.723**					
11. Cj7_Masculinity	32196	53.522	20.077	.040**	.074**	.023**	.046**	.202**	.311**	.411**	.175**	.065**	.205**				
12. Cj8_Long_Term_Orientation	32196	62.703	16.202	.019**	.068**	.022**	.511**	.159**	.362**	.404**	.310**	.375**	.381**	.348**			
13. Cj9_Indulgence	32196	37.998	14.240	.034**	.037**	.020**	.354**	.525**	.153**	.315**	.524**	.754**	.512**	.281**	.062**		
14. X1_In_Amount_Employees	32196	4.592	0.410	.018**	-.005	.009	.028**	.030**	.043**	.027**	.021**	.018**	.024**	.006	.013*	.005	
15. X2_ROA	27783	5.052	10.556	.401**	.316**	.142**	-.003	.064**	.094**	.040**	.054**	.047**	-.013*	.049**	.008	.002	-.010

**p<.01

Table 47: Descriptives and Correlations II – Schwartz; Source: Authors' compilation

Variable	N	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	
1. Y1_Debt_to_Assets	30081	0.566	0.289																
2. Y2_Debt_to_Revenue	25981	0.480	0.425	.448**															
3. Y3_SD_ROE	25819	0.381	2.543	.147**	.085**														
Cj0_Christians																			
4. Cj1_Protestants	32196	71.742	17.704	.049**	.142**	.031**													
5. Cj2_Catholics	32196	13.660	17.747	.003	.130**	.023**	.231**												
6. Cj5_Median_Income_Country/level	32196	48.595	30.908	.054**	.133**	.034**	.452**	.468**											
7. Cj11_Harmony	31661	-0.002	0.227	.094**	.089**	-0.009	-0.113**	.115**	.135**	.494**	--								
8. Cj12_Embedded	31661	0.001	0.281	-0.080**	.019**		.464**	-0.483**	.161**	-0.881**	-0.590**	--							
9. Cj13_Hierarchy	31661	0.001	0.273	-0.112**		0.010	-0.112**	-0.026**	-0.341**	-0.466**	-0.731**	.442**	--						
10. Cj14_Mastery	31661	0.005	0.113	0.005	.056**	-0.004	.451**	-0.144**	-0.213**	-0.363**	-0.370**	.223**	.252**	--					
11. Cj15_Affective_Autonomy	31661	0.004	0.370	.018**		-0.036**	-0.579**	.567**	-0.476**	.689**	.052**		.074**	--					
12. Cj16_Intellectual_Autonomy	31661	-0.004	0.249	.099**	.033**	0.009	-0.283**	.258**	.059**	.786**	.666**	.750**		.052**					
13. Cj17_Egalitarian_Commitment	31661	0.000	0.327	.128**	.133**	-0.009	.037**	-0.010	.504**	.650**	.653**	.802**	.571**	.487**					
14. X1_In_Amount_Employees	32196	4.591	0.409	-0.018**		0.009	-0.028**	.030**	-0.043**	-0.018**	-0.069**	0.010	.086**	0.001	.048**				
15. X2_ROA	27783	5.052	10.556	-0.401**	0.005		-0.003	.064**	-0.094**	-0.047**	-0.075**	.043**	.078**	.039**	.015**				
16.				.316**	.142**							.067**	.117**	.010					

**p<.01

Table 48: Descriptives and Correlations III – GLOBE; Source: Authors' compilation

Variable	N	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.			
Y1_Debt_to_Assets	30081	0.566	0.289																													
Y2_Debt_to_Revenue	25981	0.480	0.425	.448**																												
Y3_SD_ROE	23819	0.381	2.543	.147**	.085**																											
Cj0_Christians	32196	71.742	17.704	.049**	.142**	.031**																										
Cj1_Protestatism	32196	13.660	17.747	.003	.130**	.023**	.231**																									
Cj2_Catholic	32196	48.595	30.908	.054**	.133**	.034**	.452**	.468**																								
Cj3_Median_Income_Countrylevel	15692,997	7401.689	1.01**	.015**	.022**	.022**	.378**	.539**	.059**																							
Cj20_Uncertainty_Avoidance_Societal_Practices	26682	0.004	0.703	.034**	.138**	.042**	.451**	.702**	.702**	.815**																						
Cj21_Future_Orientation_Societal_Practices	26682	-0.000	0.488	.017**	.140**	.037**	.425**	.708**	.722**	.727**	.926**																					
Cj22_Power_Distance_Societal_Practices	26682	0.001	0.445	.067**	.134**	.024**	.455**	.368**	.467**	.192**	.358**	.398**																				
Cj23_Collectivism_I_Societal_Practices	26682	-0.002	0.384	.024**	.114**	.024**	.458**	.598**	.467**	.343**	.328**	.389**	.415**																			
Cj24_Humane_Orientation_Societal_Practices	26682	-0.003	0.340	.025**	.114**	.029**	.418**	.142**	.142**	.100**	.195**	.092**	.565**	.526**																		
Cj25_Performance_Orientation_Societal_Practices	26682	0.001	0.318	.015**	.168**	.035**	.530**	.415**	.521**	.616**	.819**	.759**	.597**	.279**																		
Cj26_Collectivism_II_Societal_Practices	26682	0.005	0.678	.005	.136**	.041**	.671**	.625**	.799**	.654**	.802**	.713**	.200**	.200**	.017**	.614**																
Cj27_Gender_Egalitarianism_Societal_Practices	26682	0.002	0.338	.097**	.110**	.0005	.120**	.075**	.066**	.476**	.384**	.290**	.339**	.381**	.527**	.373**	.100**															
Cj28_Assertiveness_Societal_Practices	26682	-0.001	0.351	.008	.051**	.0003	.224**	.016**	.225**	.128**	.199**	.230**	.332**	.459**	.818**	.405**	.026**	.464**														
Cj30_Uncertainty_Avoidance_Societal_Values	26682	0.001	0.587	.029**	.143**	.041**	.532**	.532**	.695**	.690**	.923**	.889**	.420**	.165**	.211**	.765**	.026**	.863**	.331**													
Cj31_Future_Orientation_Societal_Values	26682	-0.000	0.617	.085**	.194**	.029**	.707**	.433**	.704**	.217**	.617**	.555**	.774**	.165**	.211**	.766**	.766**	.274**	.057**	.637**												
Cj32_Power_Distance_Societal_Values	26682	0.001	0.378	.098**	.124**	.0011	.447**	.002	.221**	.240**	.057**	.066**	.712**	.062**	.355**	.177**	.429**	.330**	.330**	.160**	.746**											
Cj33_Collectivism_I_Societal_Values	26682	0.003	0.389	.107**	.213**	.022**	.445**	.586**	.497**	.075**	.313**	.309**	.722**	.595**	.387**	.275**	.543**	.224**	.343**	.343**	.667**											
Cj34_Human_Orientation_Societal_Values	26682	0.000	0.412	.101**	.093**	.0001	.451**	.098**	.497**	.361**	.003	.003	.705**	.140**	.380**	.380**	.380**	.580**	.265**	.175**	.717**	.660**										
Cj35_Performance_Orientation_Societal_Values	26682	-0.000	0.693	.100**	.104**	.0001	.596**	.076**	.320**	.158**	.003	.003	.753**	.081**	.345**	.108**	.485**	.236**	.265**	.164**	.726**	.882**										
Cj36_Collectivism_II_Societal_Values	26682	0.003	0.385	.054**	.137**	.019**	.713**	.181**	.557**	.181**	.499**	.432**	.618**	.247**	.330**	.200**	.200**	.231**	.863**	.649**	.825**	.863**										
Cj37_Gender_Egalitarianism_Societal_Values	26682	-0.003	0.271	.097**	.120**	.0005	.470**	.166**	.059**	.318**	.149**	.291**	.417**	.157**	.074**	.093**	.190**	.303**	.062**	.649**	.825**	.642**										
Cj38_Assertiveness_Societal_Values	26682	0.001	0.393	.051**	.071**	.032**	.346**	.448**	.600**	.533**	.657**	.716**	.025**	.003	.457**	.473**	.473**	.329**	.091**	.091**	.493**	.738**										
X1_In_Amount_Employees	32196	4.591	0.409	.018**	.005	.009	.028**	.030**	.038**	.018**	.038**	.026**	.035**	.036**	.030**	.063**	.029**	.054**	.031**	.032**	.077**	.066**										
X2_ROA	27783	5.052	10.556	.401**	.316**	.142**	.0003	.094**	.094**	.047**	.053**	.084**	.079**	.089**	.028**	.062**	.051**	.052**	.033**	.064**	.059**	.028**										

**p<.01

5.2.1.1 The Impact of Culture and Religion on the Capital Structure of SMEs

Table 49 shows the test of the first hypothesis 1a-1f, which studies cultural variables of Hofstede. The dependent variable studied is *Debt to Assets*. The model 1 introduces the country and firm-level control variables. The regression is significant with an adjusted R^2 of 17.7%. The variables *Median Income* at country level and *ROA* at firm level have a significant influence, while *Firm's size* is not statistically significant. The significances of the control variables -*Median Income* and *ROA*- continue in models 2 to 7.

Model 2 to 7 introduce the six Hofstede Values, one by one. From the 6 predictors analyzed, the result shows that *Uncertainty Avoidance*, is statistically significant at the 5% level, with an adjusted R^2 of 18,1%.

Table 50 reproduces the analyses in Table 49 with the dependent variable *Debt to Revenue*. Model 8 introduces again the country and firm-level control variables. This regression has an adjusted R^2 of 11,1%. Similar to the first model, the control variables *ROA* and *Median Income* are significant, whereas the *Amount of Employees* continues to be non-significant throughout the other six models, too. Differently to the first seven models, *Median Income* does not continue to be significant in Model 9 to 14.

Masculinity, *Uncertainty Avoidance* are statistically significant at a level of 0.05, whereas, *Individualism* is supported but in the opposite direction. However, the three predictors, *Power Distance*, *Long Term Orientation*, and *Indulgence* are not significant. Again, the effect sizes are low and reach from an R^2 of 12,1% with *Individualism* and an adjusted R^2 of 11,8% for *Masculinity* and *Uncertainty Avoidance*.

Table 51 shows the tests of hypothesis 2, 3, and 4. The model 15 introduces the country and firm-level control variables. The regression is significant with an adjusted R^2 of 17.7%. The variables *Median Income* at country level and *ROA* at firm level have a significant influence, while *Firm's size* is not statistically significant. The significances of the control variables - *Median Income* and *ROA*- continue in models 16 to 18. Model 16 introduces the variable *Christians*, model 17, the variable *Protestants*, and model 18, the variable *Catholics*. The variable *Christians* (model 16) is statistically significant ($p < .05$) and in the predicting direction, with an adjusted R^2 of 18.0%, so the size effect, with an increase of 0,3% of the adjusted R^2 is rather small.

Table 52 replicates the analysis in Table 51, but in this case, the dependent variable is *Debt to Revenue*. Model 19 introduces the control variables. It is significant with a pseudo- R^2 of 11.1%.

In contrast to model 15, only the control variable *ROA* shows statistical significance. At the firm level, *Size*, and at the country level, *Median income* are not significant.

Model 20 adds the first independent variable, *Christianity*, showing significance but in the opposite direction that was anticipated. The R^2 for the *Christianity* model is 12,4% for *Christianity* and the increase is significant. Model 21 includes the variable *Protestants*, and Model 22, the variable *Catholics*. Protestantism in Model 21 is statistically significant at the 5% level. Again, the effect sizes are low and reach to an R^2 of 11,8% with *Protestantism*.

In summary, and with the underlying data it can be concluded that culture, in this case measured by the variables *Uncertainty Avoidance, in relation to Debt to Assets*, and *Individualism*, with the opposite direction, *Masculinity, Uncertainty Avoidance, in relation to Debt to Revenue* have an impact on the capital structure of firms.

In respect to religion, *Christianity* has an impact on the capital structure of firms, measured in terms of *Debt to Assets* and *Debt to Revenue*, albeit in the opposite direction that expected. With respect to the impact of the two main faiths, *Protestantism* in model 21 shows a significant and negative effect, as predicted by hypothesis 3, even though the hypothesis is not supported by model 17, where *Protestantism* was tested with *Debt to Assets*. Catholicism is represented in models 18 and 22, which reflect hypotheses 4. However, in both tests this study did not find support in the dataset. Consequently, this study does not support the effect of Catholicism on the *Debt to Assets* and *Debt to Revenue* ratios.

So, in conclusion for the dependent variable *Debt to Assets*, hypothesis 1b was supported at the 5% level, whereas hypothesis 1a, 1c, 1d, 1e, and 1f were not supported.

For the dependent variable *Debt to Revenue*, hypothesis 1a, even though pointing in the other direction, 1b, and 1e were supported at the 5% level, whereas hypothesis 1c, 1d, and 1f were supported not supported.

Concerning the hypothesis 2-4, for the dependent variable *Debt to Assets*, hypothesis 2 was supported, but in the other direction, whereas, hypothesis 3 and 4 were not supported. For the dependent variable *Debt to Revenue*, only hypothesis 3 was supported, whereas hypothesis 2 was again supported in the other direction, and hypothesis 4 was not supported.

Table 49: Test of Model 1-7 – The Impact of Culture on Debt to Assets; Source: Authors' compilation

Variable	Y1_Debt_to_Assets													
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.547	<.001	0.549	<.001	0.545	<.001	0.548	<.001	0.552	<.001	0.545	<.001	0.548	<.001
Country Level														
Cj3_Individualism					-0.001	0.160								
Cj4_Uncertainty_Avoidance									0.001	0.023				
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	0.002	0.000	0.003	0.000	0.008	0.000	<.001	0.000	0.009	0.000	0.11
Cj6_Power_Distance			0.001	0.076										
Cj7_Masculinity						0.000	0.904							
Cj8_Long_Term_Orientation											0.000	0.455		
Cj9_Indulgence													0.000	0.849
Firm Level														
X1_In_Amount_Employees	-0.008	0.196	-0.008	0.198	-0.008	0.196	-0.008	0.196	-0.008	0.197	-0.008	0.196	-0.008	0.196
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001
Model deviance	3780.223		3777.015		3778.212		3780.209		3775.001		3779.657		3780.187	
Adjusted R ²	0.177		0.179		0.178		0.178		0.181		0.177		0.178	

Table 50: Test of Model 8-14 – The Impact of Culture on Debt to Revenue; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue													
	Model 8		Model 9		Model 10		Model 11		Model 12		Model 13		Model 14	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.447	<.001	0.451	<.001	0.440	<.001	0.465	<.001	0.459	<.001	0.435	<.001	0.429	<.001
Country Level														
Cj3_Individualism			-0.003	0.02										
Cj4_Uncertainty_Avoidance							0.003	0.02						
Cj5_Median_Income_Countrylevel	0.000	8.47E-01	0.000	0.185	0.000	0.128	0.000	0.641	0.000	0.113	0.000	0.987	0.000	0.244
Cj6_Power_Distance			0.002	0.075										
Cj7_Masculinity					0.002	0.041								
Cj8_Long_Term_Orientation											-0.002	0.055		
Cj9_Indulgence													0.003	0.143
Firm Level														
X1_In_Amount_Employees	0.007	0.31	0.008	0.306	0.007	0.31	0.007	0.311	0.008	0.306	0.007	0.308	0.007	0.309
X2_ROA	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001
Model deviance	24050.774		24047.485		24045.250		24046.427		24045.488		24047.054		24048.564	
Adjusted R ²	0.111		0.115		0.121		0.118		0.118		0.116		0.115	

Table 51: Test of Model 15-18 – The Impact of Religion on Debt to Assets; Source: Authors' compilation

Variable	DV: Y1_Debt_to_Assets							
	Model 15		Model 16		Model 17		Model 18	
	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.547	<.001	0.549	<.001	0.548	<.001	0.548	<.001
Country Level								
Cj0_Christians			0.001	0.025				
Cj1_Protestatism					0.000	0.439		
Cj2_Catholic							0.000	0.477
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	0.001	0.000	0.008	0.000	0.006
Firm Level								
X1_In_Amount_Employees	-0.008	0.199	-0.008	0.194	-0.008	0.195	-0.008	0.195
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001
Model deviance	3780.223		3775.144		3779.617		3779.710	
Adjusted R ²	0.177		0.180		0.178		0.178	

Table 52: Test of Model 19-22 – The Impact of Religion on Debt to Revenue; Source: Own compilation

Variable	DV: Y2_Debt_to_Revenue							
	Model 19		Model 20		Model 21		Model 22	
	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.447	<.001	0.452	<.001	0.455	<.001	0.451	<.001
Country Level								
Cj0_Christians			0.003	0.002				
Cj1_Protestantism					-0.002	0.023		
Cj2_Catholic							0.001	0.186
Cj5_Median_Income_Countrylevel	0.000	0.847	0.000	0.381	0.000	0.141	0.000	0.806
Firm Level								
X1_In_Amount_Employees	0.007	0.310	0.007	0.314	0.008	0.309	0.008	0.308
X2_ROA	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001
Model deviance	24050.774		24041.353		24045.493		24048.973	
Adjusted R ²	0.111		0.124		0.118		0.115	

5.2.1.2 The Impact of Culture and Religion on Risk-Taking Behavior of SMEs

In Table 53, the dependent variable is *Standard Deviation of the ROE*. In model 23, the control variables were added and led to an R^2 of 0,028. *ROA* on the firm-level and *Median income* on the country level have statistical significance, whereas the *Amount of Employees* is not statistically significant. Model 24 to 29 introduce the six Hofstede Values, one by one. From the 6 predictors analyzed, three, *Masculinity*, *Uncertainty Avoidance*, and *Long Term Orientation*, pointing in the other direction, are statistically significant. With an adjusted R^2 is 2,8% for *Masculinity* and *Uncertainty Avoidance*, and 2,9% for *Long Term Orientation*, with a significance at the 5% level.

In Table 54, the dependent variable is, again, *Standard Deviation of the ROE*. In model 30, the control variables were added which led to an R^2 of 0,028. *ROA* on the firm-level and *Median income* on the country level have statistical significance, whereas the *Amount of Employees* is not statistically significant. In Model 31 and 32 the country control variable *Median income* is not significant. In Model 31, the variable *Christians*, in model 32, *Protestants*, and in model 33, *Catholics* were introduced individually. Here Christians are statistically significant in the foretold direction, whereas Protestants are not statistically significant, and Catholics are statistically significant, but contrary to the predicted direction.

So, in conclusion for the dependent variable *SD of ROE*, hypothesis 5b, 5c, even though pointing in the other direction, and 5e were supported at the 5% level, whereas hypothesis 5a, 5d, and 5f were not supported. Hypothesis 6 is confirmed in the expected direction, and hypothesis 8 shows significance in the opposite direction. However, hypothesis 7 found no support in the dataset.

Table 53: Test of Model 23-29 – The Impact of Culture on SD of ROE; Source: Authors' compilation

Variable	Y3_SD_ROE													
	Model 23		Model 24		Model 25		Model 26		Model 27		Model 28		Model 29	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.424	<.001	0.424	<.001	0.427	<.001	0.402	<.001	0.418	<.001	0.437	<.001	0.439	<.001
Country Level														
Cj3_Individualism					0.002	0.402								
Cj4_Uncertainty_Avoidance									-0.003	0.048				
Cj5_Median_Income_Countrylevel	0.000	0.015	0.000	0.086	0.000	0.146	0.000	0.018	0.000	0.36	0.000	0.019	0.000	0.031
Cj6_Power_Distance			0.000	0.857										
Cj7_Masculinity							-0.002	0.026						
Cj8_Long_Term_Orientation											0.003	0.03		
Cj9_Indulgence													-0.003	0.288
Firm Level														
X1_In_Amount_Employees	0.016	0.678	0.016	0.681	0.016	0.68	0.018	0.647	0.016	0.682	0.014	0.713	0.016	0.691
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120640.375		120640.343		120639.689		120635.832		120636.582		120635.814		120639.263	
Adjusted R ²	0.028		0.028		0.028		0.028		0.028		0.029		0.028	

Table 54: Test of Model 30-33 – The Impact of Religion on SD of ROE; Source: Authors' compilation

Variable	Y3_SD_ROE							
	Model 30		Model 31		Model 32		Model 33	
	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.424	<.001	0.414	<.001	0.421	<.001	0.404	<.001
Country Level								
Cj0_Christians			-0.003	0.010				
Cj1_Protestatism					0.001	0.436		
Cj2_Catholic							-0.003	<.001
Cj5_Median_Income_Countrylevel	0.000	0.015	0.000	0.071	0.000	0.088	0.000	<.001
Firm Level								
X1_In_Amount_Employees	0.016	0.678	0.017	0.671	0.016	0.674	0.018	0.650
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120640.375		120634.248		120639.786		120626.739	
Adjusted R ²	0.028		0.029		0.028		0.029	

5.2.1.3 Additional analysis: Test of Interaction between Culture and Religion on the Capital Structure and Risk-Taking Behavior of SMEs

Tables Table 55, Table 56, and Table 57 analyze the interactions and moderations between the significant tested cultural and religious variables.

Table 55 analyzes the influence of the interaction between *Christians*, *Protestants*, and *Catholic*, with *Uncertainty Avoidance* on *Debt to Assets*. Model 34 has the control variables, *ROA* (significant), *Amount of Employees* (not significant), and *Median Income* (significant), as well as the independent variables *Christianity* and *Uncertainty Avoidance*, both significant on the 5% level, with an adjusted R^2 of 18,3%. Model 35 adds the interaction variable *Christianity * Uncertainty Avoidance*. Model 36 and 37 use the variable *Protestantism* as replication for *Christianity* and Model 38 and 39 use *Catholicism* in the same way. In all models, the moderation is not statistically significant.

Table 56 replicates the tests carried out by Table 55 but with *Debt to Revenue* as the dependent variable. Similar to the first set of tests in model 36 to 39, the interactions in models 40 to 45 are not statistically significant in this case either, taking $p=0.05$ as the cutoff point.

Table 57 studies *SD ROE* as dependent variable, in models 46 to 51, and also does not yield any statistically significant results ($p<0.05$).

Table 55: Test of Model 34-39 – The Interaction of Culture and Religion on Debt to Assets; Source: Authors' compilation

Variable	Y1_Debt_to_Assets																		
	Model 34			Model 35			Model 36			Model 37			Model 38			Model 39			
	Beta	p		Beta	p		Beta	p		Beta	p		Beta	p		Beta	p		
Intersection	0.554	<.001		0.552	<.001		0.552	<.001		0.551	<.001		0.552	<.001		0.552	<.001		<.001
Country Level																			
Cj0_Christians	0.001	0.015	0.001	0.007		0.000	0.619	0.000	0.842										
Cj1_Protestatism																			
Cj2_Catholic													0.000	0.953	0.000	0.952			
Cj4_Uncertainty_Avoidance	0.001	0.014	0.001	0.007	0.001	0.028	0.001	0.027	0.001	0.031	0.001	0.039							
Cj5_Median_Income_Countrylevel	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	<.001	0.000	<.001	0.000	<.001	0.000	<.001
Cj0_Christians * Cj4_Uncertainty_Avoidance				0.000	0.076														
Cj1_Protestatism * Cj4_Uncertainty_Avoidance										0.000	0.791								0.985
Cj2_Catholic * Cj4_Uncertainty_Avoidance																			
Firm Level																			
X1_In_Amount_Employees	-0.008	0.195	-0.008	0.196	-0.008	0.198	-0.008	0.198	-0.008	0.198	-0.008	0.197	-0.008	0.197	-0.008	-0.008	0.197	-0.008	0.197
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	-0.012	<.001	-0.012	<.001
Model deviance	3769.064		3765.853		3774.748		3774.677		3774.998		3774.997								
Adjusted R ²	0.183		0.184		0.180		0.180		0.181		0.181								

Table 56: Test of Model 40-45 – The Interaction of Culture and Religion on Debt to Revenue; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue											
	Model 40		Model 41		Model 42		Model 43		Model 44		Model 45	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.462	0.000	0.463	0.000	0.460	<.001	0.441	<.001	0.459	<.001	0.466	<.001
Country Level												
Cj0_Christians	0.003	0.001	0.003	0.001								
Cj1_Protestatism					-0.002	0.163	-0.003	0.035				
Cj2_Catholic									0.000	0.424	0.000	0.501
Cj4_Uncertainty_Avoidance	0.003	0.005	0.002	0.005	0.002	0.153	0.002	0.114	0.002	0.039	0.002	0.096
Cj5_Median_Income_Countrylevel	0.000	0.013	0.000	0.024	0.000	0.054	0.000	0.064	0.000	0.141	0.000	0.075
Cj0_Christians * Cj4_Uncertainty_Avoidance			0.000	0.717								
Cj1_Protestatism * Cj4_Uncertainty_Avoidance							0.000	0.108			0.000	0.095
Cj2_Catholic * Cj4_Uncertainty_Avoidance												
Firm Level												
X1_In_Amount_Employees	0.008	0.308	0.008	0.308	0.008	0.306	0.008	0.307	0.008	0.305	0.008	0.304
X2_ROA	-0.014	0.000	-0.014	0.000	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001
Model deviance	24033.573		24033.439		24043.478		24040.875		24044.827		24041.929	
Adjusted R ²	0.130		0.013		0.121		0.124		0.119		0.121	

Table 57: Test of Model 46-51 – The Interaction of Culture and Religion on SD of ROE; Source: Authors' compilation

Variable	Y3_SD_ROE											
	Model 46		Model 47		Model 48		Model 49		Model 50		Model 51	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
Intersection	0.398	0.000	0.389	0.000	0.397	<.001	0.401	<.001	0.403	<.001	0.400	<.001
Country Level												
Cj0_Christians	-0.004	0.000	-0.004	0.000								
Cj1_Protestatism					0.001	0.274	0.002	0.274				
Cj2_Catholic									-0.003	<.001	-0.003	<.001
Cj4_Uncertainty_Avoidance	-0.003	0.022	-0.002	0.102	-0.002	0.224	-0.002	0.211	0.000	0.881	0.000	0.921
Cj5_Median_Income_Countrylevel	0.000	0.689	0.000	0.237	0.000	0.179	0.000	0.175	0.000	0.003	0.000	0.004
Cj0_Christians * Cj4_Uncertainty_Avoidance			0.000	0.052							0.000	0.584
Cj1_Protestatism * Cj4_Uncertainty_Avoidance							0.000	0.745				
Cj2_Catholic * Cj4_Uncertainty_Avoidance												
Firm Level												
X1_In_Amount_Employees	0.020	0.610	0.018	0.642	0.021	0.585	0.021	0.598	0.018	0.650	0.018	0.642
X2_ROA	-0.042	0.000	-0.042	0.000	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120638.292		120634.502		120653.276		120653.170		120626.719		120626.419	
Adjusted R ²	0.029		0.029		0.028		0.028		0.029		0.029	

5.3 Robustness Checks

In order to provide some additional support for the role of culture over financial decision-making in SMEs the present study did additional test taking into account the frameworks of Schwartz and GLOBE.

5.3.1 Schwartz

Table 58 replaces the cultural values of Hofstede with the ones from Schwartz. The dependent variable studied is *Debt to Assets Ratio*. The model 52 introduces the country and firm-level control variables. The regression is significant with an adjusted R^2 of 17.7%. The variables *Median Income* at country level and *ROA* at firm level have a significant influence, while *Firm's size* is not statistically significant. The significances of the control variables *ROA*- continue in models 53 to 59. Differently to the with Hofstede values in Model 1-7, the country level variable *Median Income* does not continue to be significant in all the tested models. It is significant in model 56, significant at the 5% level in model 53 and 55 and not significant in model 54, 57, 58, and 59. Model 59, with *Egalitarian Commitment* is significant at the 5% level, with an adjusted R^2 of 18,6%. In models 53-58 are the values *Harmony*, *Embedded*, *Hierarchy*, *Mastery*, *Affective Autonomy*, and *Intellectual Autonomy*, individually added, however, none of them were significant.

Table 59 reproduces the analyses of Table 50 with the dependent variable *Debt to Revenue* and the cultural variables of Schwartz. Model 60 introduces again the country and firm-level control variables. This regression has an adjusted R^2 of 11,1%. Similar to the first model, the control variables *ROA* and *Median Income* are significant, whereas the *Amount of Employees* continues to be non-significant throughout the other six models, too. Similar to the models of Hofstede, the *Median Income* does not continue to be significant. It is significant at the 5% level in model 67 and not significant in model 61 to 66. In all the following models, the individual variables are entered one by one. Model 64 with *Mastery* with an adjusted R^2 of 12,9% is significant and model 67 with *Egalitarian Commitment* with an adjusted R^2 13,5% is significant at the 1% level. The significance of the variable *Mastery* is in line with the initial variable *Masculinity* from Hofstede. Models 61, 62, 63, 65, and 66 not significant with the variables *Harmony*, *Embedded*, *Hierarchy*, *Affective Autonomy*, and *Intellectual Autonomy*.

Table 60 reproduces the models from Table 53, with the dependent variable *Standard Deviation of the ROE* and the cultural variables of Schwartz. In model 68 only the control variables are added with an adjusted R^2 of 2,8%. *ROA* on the firm-level and *Median income*, at the 5% level, on the country level have statistical significance, whereas the *Amount of Employees* is not statistically significant. Model 75 is significant at the 5% level, with the variable *Egalitarian Commitment*, and an adjusted R^2 of 2,9%. Models 69 to 74 introduce the variables *Harmony*, *Embedded*, *Hierarchy*, *Mastery*, *Affective Autonomy*, and *Intellectual Autonomy*. All of them are not significant.

Table 58: Test of Model 52-59 – The Impact of Culture (Schwartz) on Debt to Assets; Source: Authors' compilation

Variable	Y1_Debt_to_Assets															
	Model 52		Model 53		Model 54		Model 55		Model 56		Model 57		Model 58		Model 59	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.547	<.001	0.549	<.001	0.553	<.001	0.551	<.001	0.547	<.001	0.547	<.001	0.553	<.001	0.559	<.001
Country Level																
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	0.019	0.000	0.514	0.000	0.008	0.000	<.001	0.000	0.22	0.000	0.249	0.000	0.64
Cj10_Harmony			0.044	0.293												
Cj11_Embedded					-0.051	0.395										
Cj12_Hierarchy							-0.050	0.144								
Cj13_Mastery									0.105	0.081						
Cj14_Affective_Autonomy											0.019	0.645				
Cj15_Intellectual_Autonomy													0.042	0.353		
Cj16_Egalitarian_Commitment															0.084	0.018
Firm Level																
X1_In_Amount_Employees	-0.008	0.196	-0.008	0.205	-0.008	0.204	-0.008	0.204	-0.008	0.197	-0.008	0.204	-0.008	0.204	-0.008	0.204
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001
Model deviance	3780.223		3765.789		3766.184		3764.744		3763.877		3766.707		3766.040		3761.233	
Adjusted R ²	0.177		0.182		0.180		0.182		0.180		0.180		0.180		0.186	

Table 59: Test of Model 60-67 – The Impact of Culture (Schwartz) on Debt to Revenue; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue															
	Model 60		Model 61		Model 62		Model 63		Model 64		Model 65		Model 66		Model 67	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.447	<.001	0.454	<.001	0.463	<.001	0.455	<.001	0.445	<.001	0.449	<.001	0.453	<.001	0.480	<.001
Country Level																
Cj5_Median_Income_Countrylevel	0.000	0.847	0.000	0.896	0.000	0.357	0.000	0.637	0.000	0.852	0.000	0.682	0.000	0.884	0.000	0.029
Cj10_Harmony			0.015	0.868												
Cj11_Embedded			-0.133	0.311												
Cj12_Hierarchy							-0.062	0.422								
Cj13_Mastery									0.419	<.001						
Cj14_Affective_Autonomy											0.039	0.664				
Cj15_Intellectual_Autonomy													0.009	0.924		
Cj16_Egalitarian_Commitment															0.226	0.004
Firm Level																
X1_In_Amount_Employees	0.007	0.310	0.007	0.299	0.007	0.300	0.007	0.298	0.007	0.319	0.007	0.300	0.007	0.299	0.007	0.298
X2_ROA	-0.013	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001	-0.014	<.001
Model deviance	24050.774		23823.891		23822.965		23823.349		23811.780		23823.818		23824.000		23815.259	
Adjusted R ²	0.111		0.115		0.117		0.117		0.129		0.116		0.115		0.135	

Table 60: Test of Model 68-75 – The Impact of Culture (Schwartz) on SD of ROE; Source: Authors' compilation

Variable	Y3_SD_ROE																	
	Model 68		Model 69		Model 70		Model 71		Model 72		Model 73		Model 74		Model 75			
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P		
Intersection	0.423	<.001	0.409	<.001	0.416	<.001	0.415	<.001	0.424	<.001	0.407	<.001	0.411	<.001	0.402	<.001		
Country Level																		
Cj5_Median_Income_Countrylevel	0.000	0.023	0.000	0.012	0.000	0.003	0.000	0.008	0.000	0.043	0.000	0.777	0.000	0.02	0.000	<.001		
Cj10_Harmony			-0.131	0.332														
Cj11_Embedded					0.136	0.495												
Cj12_Hierarchy							0.138	0.184										
Cj13_Mastery									-0.058	0.784								
Cj14_Affective_Autonomy											0.211	0.071						
Cj15_Intellectual_Autonomy													-0.177	0.242				
Cj16_Egalitarian_Commitment															-0.262	0.008		
Firm Level																		
X1_In_Amount_Employees	0.016	0.678	0.022	0.568	0.022	0.564	0.022	0.575	0.022	0.571	0.022	0.577	0.022	0.574	0.022	0.573		
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001		
Model deviance	120640.375		119033.214		119033.587		119032.434		119033.992		119031.258		119032.634		119026.867			
Adjusted R ²	0.028		0.028		0.028		0.028		0.028		0.029		0.028		0.029			

5.3.1 GLOBE

Table 61, Table 62, and Table 63 replaces the cultural values of Hofstede with the ones from GLOBE. The dependent variable studied is *Debt to Assets Ratio*. Due to the amount of variable the tested variables are distributed into three tables. In all three tables the first model (Model 76, 83, and 90) introduces the country and firm-level control variables. The regression is significant with an adjusted R^2 of 17.7%. The variables *Median Income* at country level and *ROA* at firm level have a significant influence, while *Firm's size* is not statistically significant. The significances of the control variables *ROA*- continue in models 77 to 96. Similar to the Schwartz values in model 53 to 59 and differently to the Hofstede values in model 1-7, the country level variable *Median Income* does not continue to be significant at the 1% level in all the tested models. It is significant on the 5% level. Similar to the other tested values, the individual values of GLOBE were added one by one. Model 91 is significant with $<0,001$, with the variable *Collectivism I Societal Values*, and an adjusted R^2 of 18,8%. Model 79, 81, 88, 89, 92, and 93, with the variables: *Power Distance Societal Practices*, *Humane Orientation Societal Practices*, *Future Orientation Societal Values*, *Power Distance Societal Values*, *Humane Orientation Societal Values*, and *Performance Orientation Societal Values*, continue to be significant at the 5% level. However, in Model 77, 78, 80, 82, 84, 85, 86, 87, 94, 95, and 96, with the variables: *Uncertainty Avoidance Societal Practices*, *Future Orientation Societal Practice*, *Collectivism I Societal Practices*, *Performance Orientation Societal Practices*, *Collectivism II Societal Practices*, *Gender Egalitarianism Societal Practices*, *Assertiveness Societal Practices*, *Uncertainty Avoidance Societal Values*, *Collectivism II Societal Values*, *Gender Egalitarianism Societal Values*, and *Assertiveness Societal Values* are not significant.

Table 64, Table 65, and Table 66 reproduce the analyses of Table 50 and Table 59 with the dependent variable *Debt to Revenue* and the cultural variables of GLOBE. Due to the amount of variable the tested variables are distributed into three tables. In all three tables the first model (Model 97, 104, and 111) introduces the country and firm-level control variables. Similar to the first model, the control variables *ROA* is significant, whereas the *Amount of Employees* and *Median Income* are non-significant throughout the all the 21 models. In all the following models, the individual variables are entered one by one. Model 112 as fully significant with the variable *Collectivism I Societal Values*, with an adjusted R^2 of 14,1%. Model 98, 100, 105, 106, 108, 109, 110, and 116 with the variables: *Uncertainty Avoidance Societal Practices*, *Power Distance Societal Practices*, *Collectivism II Societal Practices*, *Gender Egalitarianism Societal*

Practices, Uncertainty Avoidance Societal Values, Future Orientation Societal Value, Power Distance Societal Values, Humane Orientation Societal Values, and Gender Egalitarianism Societal Values are significant at the 5% level. The significance of the variable *Uncertainty Avoidance Societal Practices, Collectivism II Societal Practices, Gender Egalitarianism Societal Practices, Uncertainty Avoidance Societal Values, and Gender Egalitarianism Societal Values* are in line with the initial variables *Individualism, Uncertainty Avoidance, and Masculinity* from Hofstede. Model 99, 101, 102, 103, 107, 113, 114, 115, and 117, with the variables *Future Orientation Societal Practice, Collectivism I Societal Practices, Humane Orientation Societal Practices, Performance Orientation Societal Practices, Assertiveness Societal Practices, Humane Orientation Societal Values, Performance Orientation Societal Values, Collectivism II Societal Values, and Assertiveness Societal Values* are not significant.

Table 67, Table 68, and Table 69 reproduces the models from Table 53 and Table 60 with the dependent variable *Standard Deviation of the ROE* and the cultural variables of GLOBE. Due to the amount of variable the tested variables are distributed into three tables. In all three tables the first model (Model 118, 125, and 132) introduces the country and firm-level control variables with an adjusted R^2 of 2,8%. *ROA* on the firm-level and *Median income*, at the 5% level, on the country level have statistical significance, whereas the *Amount of Employees* is not statistically significant. Model 126, 127, 129, 130, and 131, with the variables: *Collectivism II Societal Practices, Gender Egalitarianism Societal Practices, Uncertainty Avoidance Societal Values, Future Orientation Societal Value, and Power Distance Societal Values* are significant at the 5% level. However, the adjusted R^2 is decreasing to 2,4%. The variable *Gender Egalitarianism Societal Practices* is in line with Hofstede's variable *Masculinity* in the previous tests. Models 119, 120, 121, 122, 123, 124, 128, 133, 134, 135, 136, 137, and 138 introduce the variables: *Uncertainty Avoidance Societal Practices, Future Orientation Societal Practice, Power Distance Societal Practices, Collectivism I Societal Practices, Humane Orientation Societal Practices, Performance Orientation Societal Practices, Assertiveness Societal Practices, Collectivism I Societal Values, Humane Orientation Societal Values, Performance Orientation Societal Values, Collectivism II Societal Values, Gender Egalitarianism Societal Values, and Assertiveness Societal Values*. All of them are not significant.

Table 61: Test of Model 76-82 – The Impact of Culture (GLOBE) on Debt to Assets I; Source: Authors' compilation

Variable	Y1_Debt_to_Assets													
	Model 76		Model 77		Model 78		Model 79		Model 80		Model 81		Model 82	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.547	<.001	0.539	<.001	0.545	<.001	0.553	<.001	0.551	<.001	0.556	<.001	0.542	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	0.024	0.000	0.046	0.000	0.002	0.000	0.009	0.000	0.004	0.000	0.003
Cj20_Uncertainty_Avoidance_Societal_Practices			-0.038	0.205										
Cj21_Future_Orientation_Societal_Practices					-0.031	0.413								
Cj22_Power_Distance_Societal_Practices							0.041	0.007						
Cj23_Collectivism_I_Societal_Practices									-0.037	0.165				
Cj24_Humane_Orientation_Societal_Practices											-0.048	0.056		
Cj25_Performance_Orientation_Societal_Practices													-0.070	0.06
Firm Level														
X1_ln_Amount_Employees	-0.008	0.196	-0.002	0.729	-0.002	0.731	-0.002	0.727	-0.002	0.729	-0.002	0.734	-0.002	0.737
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001
Model deviance	3780.223		999.022		999.963		995.230		998.648		996.876		996.984	
Adjusted R ²	0.177		0.170		0.169		0.174		0.172		0.174		0.172	

Table 62: Test of Model 83-89 – The Impact of Culture (GLOBE) on Debt to Assets II; Source: Authors' compilation

Variable	Y1_Debt_to_Assets																	
	Model 83		Model 84		Model 85		Model 86		Model 87		Model 88		Model 89					
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P				
Intersection	0.547	<.001	0.543	<.001	0.555	<.001	0.547	<.001	0.540	<.001	0.551	<.001	0.551	<.001				
Country Level																		
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	0.003	0.000	0.003	0.000	0.017	0.000	<.001	0.000	0.003	0.000	0.036				
Cj26_Collectivism_II_Societal_Practices			0.028	0.070														
Cj27_Gender_Egalitarianism_Societal_Practices					-0.044	0.167												
Cj28_Assertiveness_Societal_Practices					0.017	0.536												
Cj30_Uncertainty_Avoidance_Societal_Values									0.030	0.234								
Cj31_Future_Orientation_Societal_Values											0.037	0.012						
Cj32_Power_Distance_Societal_Values													-0.053	0.009				
Firm Level																		
X1_In_Amount_Employees	-0.008	0.196	-0.002	0.726	-0.002	0.726	-0.002	0.729	-0.002	0.732	-0.002	0.728	-0.002	0.729				
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001				
Model deviance	3780.223		997.341		998.690		1000.254		999.197		994.144		993.569					
Adjusted R ²	0.177		0.170		0.171		0.169		0.169		0.175		0.174					

Table 63: Test of Model 90-96 – The Impact of Culture (GLOBE) on Debt to Assets III; Source: Authors' compilation

Variable	Y1_Debt_to_Assets													
	Model 90		Model 91		Model 92		Model 93		Model 94		Model 95		Model 96	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.547	<.001	0.549	<.001	0.551	<.001	0.548	<.001	0.545	<.001	0.549	<.001	0.549	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.008	0.000	<.001	0.000	0.110	0.000	0.019	0.000	0.017	0.000	0.051	0.000	0.054
Cj33_Collectivism_I_Societal_Values			0.0678	<.001										
Cj34_Humane_Orientation_Societal_Values					0.043	0.032								
Cj35_Performance_Orientation_Societal_Values							0.025	0.019						
Cj36_Collectivism_II_Societal_Values									0.037	0.110				
Cj37_Gender_Egalitarianism_Societal_Values											0.042	0.160		
Cj38_Assertiveness_Societal_Values													-0.039	0.098
Firm Level														
X1_In_Amount_Employees	-0.008	0.196	-0.002	0.721	-0.002	0.730	-0.002	0.728	-0.002	0.731	-0.002	0.728	-0.002	0.728
X2_ROA	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001	-0.012	<.001
Model deviance	3780.223		988.438		995.890		995.007		998.033		998.645		997.812	
Adjusted R ²	0.177		0.180		0.172		0.172		0.170		0.169		0.171	

Table 64: Test of Model 97-103 – The Impact of Culture (GLOBE) on Debt to Revenue I; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue													
	Model 97		Model 98		Model 99		Model 100		Model 101		Model 102		Model 103	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.447	<.001	0.434	<.001	0.456	<.001	0.472	<.001	0.474	<.001	0.460	<.001	0.452	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.847	0.000	0.073	0.000	0.460	0.000	0.731	0.000	0.35	0.000	0.804	0.000	0.541
Cj20_Uncertainty_Avoidance_Societal_Practices			-0.144	0.027										
Cj21_Future_Orientation_Societal_Practices					-0.095	0.266								
Cj22_Power_Distance_Societal_Practices					0.082	0.045								
Cj23_Collectivism_I_Societal_Practices									-0.104	0.074				
Cj24_Humane_Orientation_Societal_Practices											-0.008	0.882		
Cj25_Performance_Orientation_Societal_Practices													-0.117	0.169
Firm Level														
X1_In_Amount_Employees	0.007	0.310	0.006	0.475	0.007	0.469	0.007	0.464	0.006	0.481	0.006	0.476	0.007	0.469
X2_ROA	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001
Model deviance	24050.774		15359.566		15363.311		15360.448		15361.304		15364.563		15362.647	
Adjusted R ²	0.111		0.123		0.110		0.114		0.115		0.105		0.110	

Table 65: Test of Model 104-110 – The Impact of Culture (GLOBE) on Debt to Revenue II; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue													
	Model 104		Model 105		Model 106		Model 107		Model 108		Model 109		Model 110	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.447	<.001	0.448	<.001	0.490	<.001	0.548	<.001	0.436	<.001	0.467	<.001	0.467	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.847	0.000	0.234	0.000	0.219	0.000	0.868	0.000	0.194	0.000	0.889	0.000	0.352
Cj26_Collectivism_II_Societal_Practices			0.084	0.013										
Cj27_Gender_Egalitarianism_Societal_Practices			-0.156	0.024										
Cj28_Assertiveness_Societal_Practices							0.047	0.451						
Cj30_Uncertainty_Avoidance_Societal_Values									0.117	0.030				
Cj31_Future_Orientation_Societal_Values											0.069	0.047		
Cj32_Power_Distance_Societal_Values													-0.098	0.041
Firm Level														
X1_In_Amount_Employees	0.007	0.310	0.007	0.469	0.007	0.473	0.006	0.479	0.007	0.466	0.007	0.471	0.007	0.475
X2_ROA	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.138	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001
Model deviance	24050.774		15358.165		15359.340		15363.999		15359.731		15360.523		15360.270	
Adjusted R ²	0.111		0.119		0.120		0.107		0.116		0.118		0.116	

Table 66: Test of Model 111-117 – The Impact of Culture (GLOBE) on Debt to Revenue III; Source: Authors' compilation

Variable	Y2_Debt_to_Revenue													
	Model 111		Model 112		Model 113		Model 114		Model 115		Model 116		Model 117	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.447	<.001	0.487	<.001	0.466	<.001	0.464	<.001	0.457	<.001	0.467	<.001	0.463	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.847	0.000	0.643	0.000	0.334	0.000	0.534	0.000	0.656	0.000	0.301	0.000	0.538
Cj33_Collectivism_I_Societal_Values			0.169	<.001										
Cj34_Humane_Orientation_Societal_Values					0.071	0.135								
Cj35_Performance_Orientation_Societal_Values							0.041	0.106						
Cj36_Collectivism_II_Societal_Values									0.075	0.157		0.136	0.040	
Cj37_Gender_Egalitarianism_Societal_Values														
Cj38_Assertiveness_Societal_Values													-0.052	0.335
Firm Level														
X1_In_Amount_Employees	0.007	0.310	0.006	0.491	0.007	0.471	0.007	0.474	0.007	0.47	0.006	0.484	0.006	0.481
X2_ROA	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001	-0.013	<.001
Model deviance	24050.774		15347.084		15362.283		15361.884		15362.517		15360.218		15363.627	
Adjusted R ²	0.111		0.141		0.111		0.112		0.111		0.116		0.107	

Table 67: Test of Model 118-124 – The Impact of Culture (GLOBE) on SD of ROE I; Source: Authors' compilation

Variable	Y3_SD_ROE													
	Model 118		Model 119		Model 120		Model 121		Model 122		Model 123		Model 124	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.423	<.001	0.396	<.001	0.386	<.001	0.374	<.001	0.378	<.001	0.380	<.001	0.386	<.001
Country Level														
Cj5_Median_Income_Country/level	0.000	0.023	0.000	0.296	0.000	0.057	0.000	<.001	0.000	0.004	0.000	<.001	0.000	0.01
Cj20_Uncertainty_Avoidance_Societal_Practices			0.107	0.122										
Cj21_Future_Orientation_Societal_Practices			0.079	0.333										
Cj22_Power_Distance_Societal_Practices							-0.071	0.134						
Cj23_Collectivism_I_Societal_Practices									0.031	0.628				
Cj24_Humane_Orientation_Societal_Practices											0.011	0.878		
Cj25_Performance_Orientation_Societal_Practices													0.120	0.224
Firm Level														
X1_In_Amount_Employees	0.016	0.678	0.019	0.657	0.020	0.641	0.021	0.618	0.022	0.614	0.021	0.619	0.019	0.652
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120640.375		95838.085		95839.519		95838.271		95840.199		95858.408		95838.996	
Adjusted R ²	0.028		0.024		0.023		0.023		0.023		0.023		0.023	

Table 68: Test of Model 125-131 – The Impact of Culture (GLOBE) on SD of ROE II; Source: Authors' compilation

Variable	Y3_SD_ROE													
	Model 125		Model 126		Model 127		Model 128		Model 129		Model 130		Model 131	
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P
Intersection	0.423	<.001	0.388	<.001	0.354	<.001	0.378	<.001	0.398	<.001	0.373	<.001	0.371	<.001
Country Level														
Cj5_Median_Income_Countrylevel	0.000	0.023	0.000	0.023	0.000	<.001	0.000	<.001	0.000	0.052	0.000	<.001	0.000	<.001
Cj26_Collectivism_II_Societal_Practices			-0.092	0.020										
Cj27_Gender_Egalitarianism_Societal_Practices			0.171	0.016										
Cj28_Assertiveness_Societal_Practices			-0.029	0.664										
Cj30_Uncertainty_Avoidance_Societal_Values									-0.124	0.042				
Cj31_Future_Orientation_Societal_Values											-0.087	0.017		
Cj32_Power_Distance_Societal_Values													0.107	0.044
Firm Level														
X1_In_Amount_Employees	0.016	0.678	0.021	0.629	0.026	0.552	0.022	0.611	0.018	0.686	0.021	0.631	0.021	0.618
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120640.375		95835.360		95835.568		95840.238		95836.176		95835.375		95836.583	
Adjusted R ²	0.028		0.024		0.024		0.023		0.024		0.024		0.024	

Table 69: Test of Model 132-138 – The Impact of Culture (GLOBE) on SD of ROE III; Source: Authors' compilation

Variable	Y3_SD_ROE															
	Model 132		Model 133		Model 134		Model 135		Model 136		Model 137		Model 138			
	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P	Beta	P		
Intersection	0.423	<.001	0.371	<.001	0.374	<.001	0.374	<.001	0.382	<.001	0.374	<.001	0.374	<.001	0.387	<.001
Country Level																
Cj5_Median_Income_Countrylevel	0.000	0.023	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	0.000	<.001	0.000	0.002
Cj33_Collectivism_I_Societal_Values			-0.089	0.092												
Cj34_Humane_Orientation_Societal_Values			-0.082	0.114												
Cj35_Performance_Orientation_Societal_Values							-0.045	0.120								
Cj36_Collectivism_II_Societal_Values									-0.085	0.135						
Cj37_Gender_Egalitarianism_Societal_Values													-0.097	0.215		
Cj38_Assertiveness_Societal_Values															-0.094	0.179
Firm Level																
X1_In_Amount_Employees	0.016	0.678	0.022	0.604	0.021	0.629	0.021	0.618	0.020	0.648	0.022	0.615	0.019	0.019	0.019	0.656
X2_ROA	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001	-0.042	<.001
Model deviance	120640.375		95837.930		95837.990		95838.010		95838.278		95838.978		95838.764			
Adjusted R ²	0.028		0.024		0.024		0.023		0.024		0.023		0.023		0.023	

5.4 Discussion

Does culture and religion matter in financial decisions? To answer this question, the present study used a large database of 27,778 medium-sized firms from the EU27 over the 2015-2019 period. This study provides some support for the impact of culture and religion on financial decisions, but compared to previous studies, this impact appears to be smaller.

The differential impact of culture and religion revealed by the dataset can be explained by the unique research design characteristics, which shed new light on the aforementioned research question. The research design differs from previous studies in five ways.

First, due to the timeframe of the dataset, which includes the most recent firm-level data, with the closest period in the literature being 2007-2015, by Diez-Esteban *et al.* (2019). This implies that, in addition, this study has taken into account the most recent balance sheet and accounting standards.

Second, compared to prior studies, this study used one of the largest firm-level datasets, with up to N=27,778, the average sample ranging from N=5,000 to N=10,000 (Baxamusa & Jalal, 2014; Adhikari & Agrawal, 2016; and He & Hu, 2016). Also, aside from being a large dataset, it specializes in privately held manufacturing SMEs, unlike other databases including publicly traded companies, as used by Baxamusa & Jalal (2014), among others.

As a third aspect, a full European dataset based on the EU-27 countries was created, similar to Gaganis *et al.*'s (2019), and not a worldwide one like Diez-Esteban *et al.*'s (2019) or a US dataset (Adhikari & Agrawal 2016; He & Hu 2016). Considering the Christian roots of Europe⁷⁴, the relative predominance of US studies in this field of study is surprising. In this regard, the results suggest that European societies have evolved and that nowadays, culture and religion only slightly affect financial behavior.

Fourthly, this study did not only include religion in general, like Omer *et al.* (2018) and Cai and Shi (2017), but also differentiated between Catholics and Protestants beliefs. The three major culture models were included, not like Verduch Arose *et al.* (2014), only Hofstede, or like Hayward and Kimmelmeier (2011), only Schwartz, or Antonczyk and Salzmann (2014), only GLOBE, to overcome shortcomings in the individual cultural values of each one.

Finally, most previous studies used an inadequate methodology by applying ordinary least square (OLS) regression on a multilevel dataset with multilevel variables, such as variables at the national and organizational levels (Hilary and Hui, 2009; Jiang *et al.*, 2015: Adihikari and

⁷⁴ See, for example, the wide debate about the inclusion of Christianity in the European Constitution.

Agrawal, 2016; He and Hu, 2016). Therefore, this study focused on a multilevel research question and employed hierarchical linear modeling to explore the uniqueness of the multilevel dataset, where organizational data is nested within institutional data. According to Molina-Azorin *et al.* (2020), “multilevel research includes the development of multilevel theory (e.g., combining different theoretical approaches at different levels and establishing relationships between constructs at different levels), as well as the main elements of methods for empirical studies (sampling, data collection, variables and their measures, and analysis techniques...” (p. 309). Multilevel research can help overcome the problems associated with classical data aggregation and disaggregation methods that can lead to irrelevant conclusions when using data measured and analyzed at a different level because the hierarchical and nested structure of the data is not taken into account (Molina-Azorin *et al.* 2020).

These five reasons, may help to explain the findings, that religion and national culture have some impact in the SMEs financial decision making, but its differences in the nowadays EU countries are less relevant than in decades before.

5.4.1 The Impact of Culture and Religion on the Capital Structure of SMEs

With respect to the hypotheses of the impact of culture and religion on firms' capital structure, the two measures of capital structure produced different outcomes. Even though the *Debt to Asset Ratio* has been widely used and accepted for measuring the capital structure of firms, religion and culture dimensions seems to have a higher predictive power in SMEs on the second variable, Debt to Revenue. In this sense, the context of SMEs may be relevant for highlighting the role of borrowing in relation to revenue and the possibility of paying back the debts with it. In the beginning this study started with various control variables, from the organizational and institutional level, which were reduced, due to the size at the country level (N=24), to two control variables on the organizational level and one on the institutional level.

The findings indicate that a significant percentage of the capital structure of European SMEs can be explained by country and firm-level variables. Specifically, the *ROA* and the country variable *Median income* account for up to 17,7%.

The first part of the set of hypotheses dealt with the impact of culture on the capital structure of the firm. With the variable *Debt to Assets*, significant results for the variable *Uncertainty Avoidance* were found, at the 5% level. All the other Hofstede variables were not significant.

In the robustness check models, *Egalitarian Commitment* from Schwartz, at the 5% level, and *Collectivism I Societal Values* from GLOBE were significant.

The reproduction of the test with the dependent variable *Debt to Revenue*, presented a significant influence, at the 5% Level, of *Individualism*, in the other direction, *Masculinity*, and *Uncertainty Avoidance*. The other ones were not significant. In the robustness check models, *Mastery* and *Egalitarian Commitment*, at the 5% level, from Schwartz and *Uncertainty Avoidance Societal Practices*, *Power Distance Societal Practices*, *Collectivism II Societal Practices*, *Gender Egalitarianism Societal Practices*, *Uncertainty Avoidance Societal Values*, *Future Orientation Societal Value*, *Power Distance Societal Values*, *Humane Orientation Societal Values*, and *Gender Egalitarianism Societal Values*, all at the 5% level, and *Collectivism I Societal Values*, from GLOBE were significant. These results, from the three different cultural theories, are in line with each other.

The results for *Uncertainty Avoidance* with both dependent variables was in line with the hypothesis that a higher level of uncertainty avoidance leads to lower level of debt. These findings support earlier findings, for example, and among others, Wang and Esqueda (2014) and Haq et al. (2018), and stay in contrast with Aggarwal & Goodell (2010), who find evidence for the opposite, that uncertainty avoidance leads to less equity and, therefore, to more leverage. The findings for *Individualism* in relation to *Debt to Revenue* was not in line with the hypothesis that a higher level of individualism leads to higher level of debt, which was based on the studies of Antonczyk and Salzmann (2014), Gaganis et al. (2019), Haq et al. (2018), and Wang & Esqueda (2014). However, the insignificance of the first dependent variable accompanies the findings of Aggarwal & Goodell (2010), who also did not find any significance for *Individualism*.

The evidence of higher *Masculinity*, which leads to higher amount of debt, is also in line with the predictions, and the study of Chui et al. (2016). The rest was not significant. *Long Term Orientation*, hypothesis 1c, which should have had an influence, did not show any significance. Based on the *Debt to Assets* and *Debt to Revenue* ratios, the explanatory value of culture / one of the cultural variables from each cultural theory only adds up to between 0,3% and 1,0% for Hofstede, 0,9%-2,4% for Schwartz, and 0,3%-3,0% for GLOBE, of the capital structure of firms.

The second part of the set of hypotheses dealt with the impact of religion on the capital structure of the firm. In that sense, the results demonstrate the influence of the Christian religion on the

capital structure of SMEs in the opposite direction to what this study had anticipated based on the literature review. The results are consistent with He & Hu (2016), who also found larger loan amounts for countries of high religious adherence. Two reasons may help to explain these results. On the one hand, while *Christianity* has a significant effect, the effect size is small. This could be due to the fact that the contemporary data reflect the loss of influence of religion on firms and individuals in European countries.⁷⁵ On the other hand, most studies conducted so far on this matter are from Anglo-Saxon countries, and when providing evidence for the influence of Christian religions, Protestantism tends to have a greater impact, something that may differ in European countries with a majority of Catholics (France, Spain, and Italy, among others). In this study of 24 EU Member States, more than 14 had a Catholic majority, compared to 5 mainly Protestant states, with an overall percentage of 44,5% Catholics and 11,8% Protestants (Bundeszentrale für politische Bildung, 2019). Thus, when studies from Anglo-Saxon countries or regions refer to the percentage of Christians, they are actually referring to Protestants (since they are mainly Protestant countries), and the opposite occurs in European studies.

The results of the hypotheses 3 and 4 tests for measuring *Protestant* and *Catholic* influence over *Debt to Assets* were not significant. In terms of their impact on the *Debt to Revenue* ratio, the effect of *Protestantism* is significant, while *Catholicism* was not significant.

Based on the *Debt to Assets* and *Debt to Revenue* ratios, the explanatory value of religion or of one of the two religious affiliations only adds up to between 0,3% and 1,5% of the capital structure of firms. Both ratios are significant, but the effect size is small.

Returning to the initial question: does culture and religion have an impact on SMEs' capital structure across Europe? The answer is definitely yes, but lower and in a different way than previous studies in the literature have found.

So, why are the results of this study inconsistent with previous studies, pointing to the non-significance of religion and its influence on financial decisions? On the one hand, it could mean that culture and religion are losing influence on the financial structure of firms, and other factors are becoming more influential. On the other hand, it remains unclear whether this is an overall trend or whether the results of this study of European SMEs between 2015 and 2019 are so specific that the effect of culture and religion is only denied within this timeframe and context, as opposed to other studies that have found a strong correlation between religious influence and

⁷⁵ Church affiliation within Europe declined significantly over the last decade (Bullivant, 2018).

financial decisions (Hilary and Hui, 2009; Adhikari and Agrawal, 2016; Diez-Esteban *et al.* 2019).

5.4.2 The Impact of Culture and Religion on the Risk-Taking Behavior of SMEs

The second research question was whether culture and religion influences SMEs' risk-taking behavior. Therefore the standard deviation of the return on equity ratio to assess (*SD of ROE*) was used to present the risk at the organizational level, as Titman and Wessels (1988) and Mogha and Williams (2021) have previously done. Thanks to the uniqueness of the underlying five-year panel data, the standard deviation was calculated for a five-year time horizon, following Killins *et al.* (2020), Saif-Alyousfi *et al.* (2020), Dalwai *et al.* (2021), and Rutkowska-Ziark (2022).

In terms of risk, the control variables account for most of the R^2 values. The firm-level variable *ROA* and the country variable *Median Income* show a high significance. The *Amount of Employees* did not show any significance.

Hypothesis 5a – 5e, were tested in model 24 – 29. Hypothesis 5b and 5e were significant at the 5% level, stating that high levels of *Masculinity*, *Uncertainty Avoidance*, lead to lower risk-taking. These results are in line with Ashraf, Zheng, & Arshad (2016), whereas contradict the results of Verduch Arosa *et al.* (2010) & (2014). The results for *Long Term Orientation* were in the opposite way than expected. However, other studies did not find any significance for *Long Term Orientation* (Ashraf, Zheng, & Arshad, 2016).

Hypothesis 5a, 5d, and 5f, with the variables *Power Distance*, *Individualism*, and *Indulgence* were not significant. In the robustness test, the variables *Gender Egalitarianism Societal Practices*, *Uncertainty Avoidance Societal Values* were also in line with the results of the Hofstede variables.

Hypothesis 6, 7, and 8 were tested in model 31-33. Hypothesis 6 was statistically significant, and in line with several other studies (Hilary & Hui, 2009; Dryeng *et al.*, 2012, Kanagaretnam *et al.*, 2015; and Adhikari & Agrawal, 2016) that show that a higher levels of Christianity in a country leads to lower levels of risk. Whereas the level of Protestantism in a country, tested in hypothesis 7 was not statistically significant.

Hypothesis 8, which tested the impact of Catholicism on risk the firms risk-taking was significant, however predicting in the other direction. Therefore, the results of this study do not

accompany previous studies, like Shu et al. (2012) and Diez-Esteban et al. (2019), who state that firms in catholic areas tend to carry higher levels of risk. However, and on the other hand, these results are in line with Baxamusa and Jalal (2015), who found that Catholics tend to take less risk.

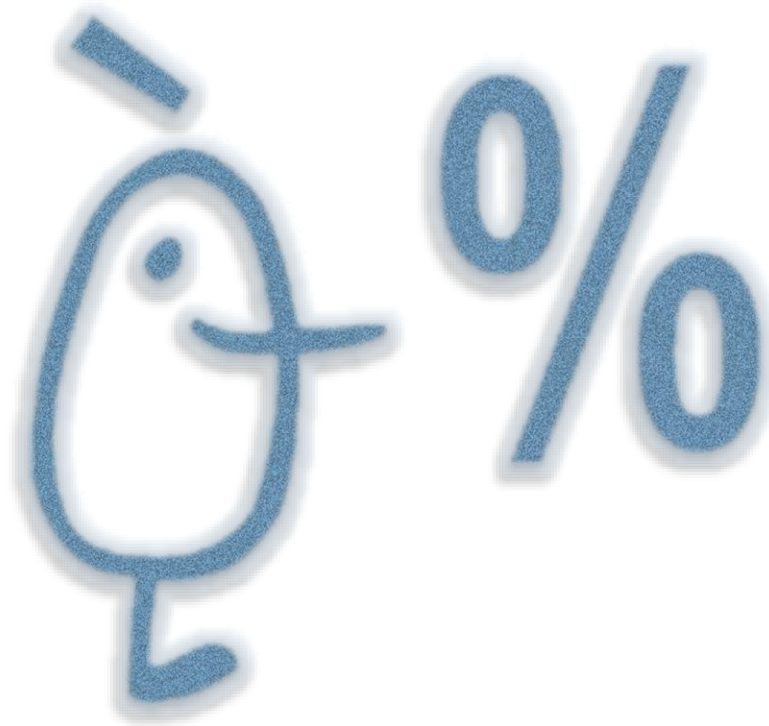
Table 70 and Table 71 provide a summary of the findings.

Table 70: Overview of the Models 2-14 – The Impact of Culture on Debt to Assets & Debt to Revenue; Source: Authors' compilation

Hypotheses	Model	Dependent Variable	Independent Variable	Result
1a	3	Debt to Assets	Individualism	Not supported
1b	5	Debt to Assets	Uncertainty Avoidance	Supported at 5% Level
1c	6	Debt to Assets	Long Term Orientation	Not supported
1d	2	Debt to Assets	Power Distance	Not supported
1e	4	Debt to Assets	Masculinity	Not supported
1f	7	Debt to Assets	Indulgence	Not supported
1a	10	Debt to Revenue	Individualism	Rejected
1b	12	Debt to Revenue	Uncertainty Avoidance	Supported at 5% Level
1c	13	Debt to Revenue	Long Term Orientation	Not supported
1d	9	Debt to Revenue	Power Distance	Not supported
1e	11	Debt to Revenue	Masculinity	Supported at 5% Level
1f	14	Debt to Revenue	Indulgence	Not supported

Table 71: Overview of the Models 16-33 – The Impact of Religion on Debt to Assets & Debt to Revenue – and The Impact of Culture and Religion on SD of ROE; Source: Authors' compilation

Hypotheses	Model	Dependent Variable	Independent Variable	Result
2	16	Debt to Assets	Christians	Rejected
3	17	Debt to Assets	Protestants	Not supported
4	18	Debt to Assets	Catholics	Not supported
2	20	Debt to Revenue	Christians	Rejected
3	21	Debt to Revenue	Protestants	Supported
4	22	Debt to Revenue	Catholics	Not supported
5a	25	SD of ROE	Individualism	Not supported
5b	27	SD of ROE	Uncertainty Avoidance	Supported at 5% Level
5c	28	SD of ROE	Long Term Orientation	Rejected
5d	24	SD of ROE	Power Distance	Not supported
5e	26	SD of ROE	Masculinity	Supported at 5% Level
5f	29	SD of ROE	Indulgence	Not supported
6	31	SD of ROE	Christians	Supported
7	32	SD of ROE	Protestants	Not supported
8	33	SD of ROE	Catholics	Rejected



CHAPTER 6

CONCLUSIONS

6 CONCLUSIONS

The question of optimal capital structure has attracted several researchers throughout the last sixty years. Over time, theories that departed from a perfect market scenario where the structure of capital was irrelevant, such as the Modigliani-Miller-Theorem, have incorporated more and more assumptions and factors. These factors reached from potential bankruptcy costs to tax relevance, as the Trade-Off-Theory, to a hierarchy of financing preferences, as the Pecking-Order-Theory, to the perfect market timing for access to debt or equity, as the dynamic capital structure approach of the window-of-opportunities approach.

However, all financial theories did not include the influence of CEOs, their socioeconomic background, and the firm's institutional surrounding, even though the Principal Agency Theory, the UET, and Institutional Theory have shown that these influences are essential.

In this study, the Principal Agency Theory, the UET, and Institutional Theory are used to contend that firms' capital structure is affected by their managers' values, which are shaped and influenced by cultural and religious values and those of the country in which the firm is based. Therefore, this study evaluated the various cultural models and theories and the influence of religion on individuals, organizations, and institutions. In order to achieve this aim, the different models and definitions that appear in the literature when discussing culture were described. They reach from historical definitions, like the models of Kluckhohn and Strodtbeck, to modern definitions from Hofstede, GLOBE, and Schwartz. This study also studies the diverse influence of religion on three different levels; the individual, the organizational, and the institutional level.

As a result, and from an organizational perspective, this study proposed that cultural values and religious affiliations had a specific impact on firms' capital structure. Thus, this study aimed to identify the influence of culture and religion on the capital structure of SMEs.

Through a database of 27.778 manufacturing SMEs from 24 countries of the EU with financial information from 2015-2019 and using, due to the data structure, multilevel analysis, this study analyzed the dependence of cultural values and religious belonging on the firms' capital structure and risk-taking practices. Here, evidence is presented that indicates that using the cultural framework from Hofstede (2021) and Christian belonging data from 24 European countries and the two main Christian faiths, specific cultural values, have some bearing on firms' capital structure and risk-taking practices.

The results are partially significant and indicate that Individualism, Masculinity, and Uncertainty Avoidance, on the cultural level, as well as religion in general, Protestantism and Catholicism, influence the capital structure of the SMEs. More specifically, firms in countries with a higher level of Individualism and Masculinity tend to have a higher level of debt than those in countries with a high level of Uncertainty Avoidance, who instead tend to have a lower level of debt. Furthermore, speaking about the level of religion, firms in countries with a high level of religiosity tend to have a higher level of debt than firms in countries with a high level of Protestants, who instead tend to have a lower level of debt. However, the results also show that the overall size effects are small.

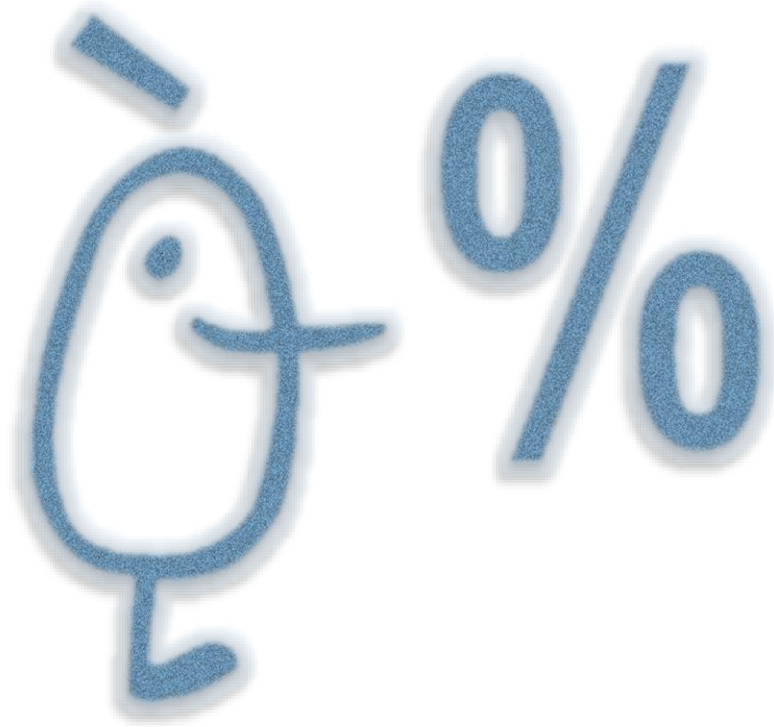
In summary, the study shows that some specific cultural dimensions and religion influence the firm's capital structure and risk-taking approach. However, the impact is reduced compared to previous studies, as highlighted in the discussion section.

This leads to the question of whether culture and religion have reduced their impact on decision-making and financial decisions. With the critical evaluation of the results and comparison with the literature, this study finds various explanations for why the results differ from other studies. For example, religious affiliation in Europe varies from the mostly US-based previous studies. This study makes significant contributions to the literature. First, the study contributes to the finance theories, acknowledging that institutional theories and UET may complement the actual knowledge for understanding finance decision-making. Second, the study contributes to culture and religion lines of research, developing their potential impact in a key area, finance decisions in SMEs, and providing evidence that supports the role of culture and religion on the capital structure of the SME and risk-taking behavior. Third, this study contributes to the knowledge about the European environment as this work suggests that the diversity between European countries in values has reduced its impact on key financial behaviors, as is the case of capital structure and risk-taking. Overall, it tries to shed some light on the question of how culture and religion are related to capital structure decisions; in a pan-European context and on the organizational level with a specification on manufacturing SMEs, promising implications for other researchers and practitioners who are dealing with the impact of culture or/and religion on capital structure were given.

However, like any other study, there appear to be various limitations. First, only average data from each country to measure the religion and country variables were used, even though there are local variations within countries; for example, in Germany, roughly one-third of the

population is Catholic, one-third is Protestant, and one-third is non-denominational. Second, this study has attempted to explain the individual influences of decision-makers, but only a personal qualitative or quantitative interview could provide a more precise picture of each decision-makers religious beliefs. Moreover, the influence of religion on culture or vice versa and the intermediating effect of both on the capital structure and risk-taking preference could not be displayed.

Future lines of research could start exactly where the study's limitations lie. For example, CEOs could be questioned on religion's role in their financial decisions, similar to Zitelmann's study (2017). Also, the proposed model could be applied to smaller samples, such as local companies at the state level (Dasi, Iborra, & Safon, 2015) or even at the county level.



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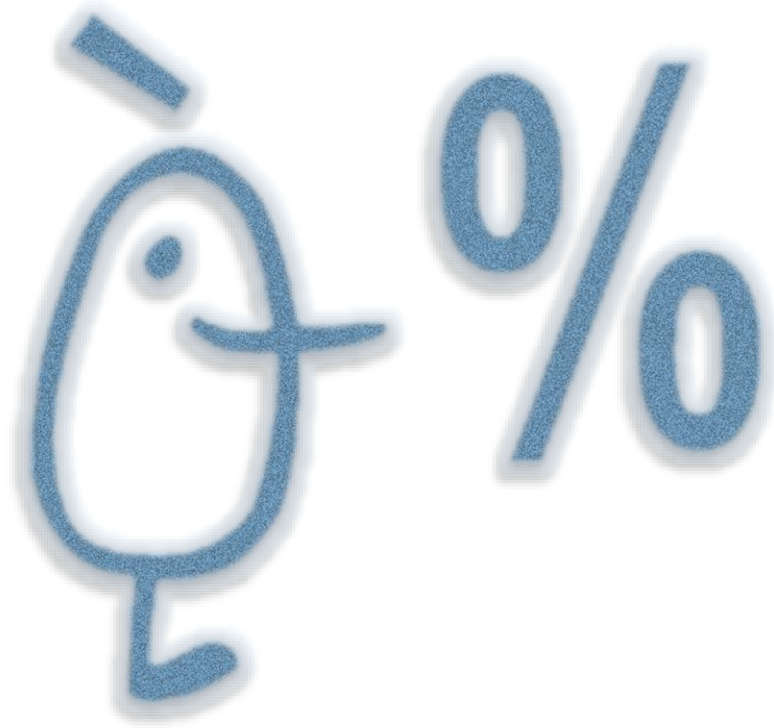
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APENDIX

APENDIX

Table 72: Cultural Variables of Hofstede; Source: Authors' compilation based on Hofstede (2021)

Country	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
Austria	11	55	79	70	60	63
Belgium	65	75	54	95	82	57
Bulgaria	70	30	40	85	69	16
Croatia	73	33	40	80	58	33
Czech Republic	57	58	57	74	70	29
Denmark	18	74	16	23	35	70
Estonia	40	60	30	60	82	16
Finland	33	63	26	59	38	57
France	68	71	43	86	63	48
Germany	35	67	66	65	83	40
Greece	60	35	57	100	45	50
Hungary	46	80	88	82	58	31
Ireland	28	70	68	35	24	65
Italy	50	76	70	75	61	30
Latvia	44	70	9	63	69	13
Lithuania	42	60	19	65	82	16
Luxembourg	40	60	50	70	64	56
Netherlands	38	80	14	53	67	68
Poland	68	60	64	93	38	29
Portugal	63	27	31	99	28	33
Romania	90	30	42	90	52	20
Slovakia	100	52	100	51	77	28
Slovenia	71	27	19	88	49	48
Spain	57	51	42	86	48	44
Sweden	31	71	5	29	53	78

Table 73: Cultural Variables of Schwartz; Source: Authors' compilation based on Schwartz (2008)

Country	Harmony	Embedded	Hierarchy	Mastery	Affective Autonomy	Intellectual Autonomy	Egalitarian Commitment
Austria	4,31	3,11	1,75	3,92	4,29	4,90	4,89
Belgium	4,35	3,25	1,69	3,84	3,94	4,64	5,20
Bulgaria	4,13	3,87	2,68	4,02	3,47	4,29	4,13
Croatia	4,02	4,00	2,55	4,05	3,92	4,35	4,60
Czech Republic	4,27	3,59	2,22	3,75	3,49	4,62	4,45
Denmark	4,16	3,19	1,86	3,91	4,30	4,77	5,03
Estonia	4,31	3,81	2,04	3,79	3,36	4,23	4,58
Finland	4,34	3,37	1,8	3,66	3,96	4,93	4,90
France	4,21	3,2	2,21	3,72	4,39	5,13	5,05
Germany	4,62	3,03	1,87	3,86	4,11	4,99	5,07
Greece	4,40	3,41	1,83	4,25	3,92	4,39	4,84
Hungary	4,34	3,6	1,94	3,73	3,63	4,57	4,51
Ireland	3,77	3,60	1,94	3,73	3,63	4,57	4,90
Italy	4,62	3,46	1,60	3,81	3,30	4,91	5,27
Latvia	4,46	3,8	1,80	3,75	3,48	4,22	4,32
Netherlands	4,05	3,19	1,91	3,97	4,13	4,85	5,03
Poland	3,86	6,86	2,51	3,84	3,32	4,31	4,48
Portugal	4,27	3,43	1,89	4,11	3,62	4,53	5,21
Romania	4,11	3,78	2,00	4,06	3,45	4,61	4,48
Slovakia	4,47	3,82	2,00	3,83	2,99	4,29	4,58
Slovenia	4,45	3,71	1,62	3,71	3,72	4,88	4,56
Spain	4,47	3,31	1,84	3,80	3,76	4,99	5,23
Sweden	4,46	3,12	1,83	3,81	4,24	5,09	4,90

Table 74: Cultural Variables of GLOBE I - Practices; Source: Authors' compilation based on GLOBE (2020)

Country	Uncertainty Avoidance Societal Practices	Future Orientation Societal Practices	Power Distance Societal Practices	Collectivism I Societal Practices (Institutional)	Humane Orientation Societal Practices	Performance Orientation Societal Practices	Collectivism II Societal Practices (In-group Collectivism)	Gender Egalitarianism Societal Practices	Assertiveness Societal Practices
Austria	5,16	4,46	4,95	4,3	3,72	4,44	4,85	3,09	4,62
Czech Republic	4,44	3,63	3,59	3,60	4,17	4,11	3,18	3,79	3,69
Denmark	5,22	4,44	3,89	4,80	4,44	4,22	3,53	3,93	3,80
Finland	5,02	4,24	4,89	4,63	3,96	3,81	4,07	3,35	3,81
France	4,43	3,48	5,28	3,93	3,40	4,11	4,37	3,64	4,13
Germany	5,22	4,27	5,25	3,79	3,18	4,25	4,02	3,10	4,55
Greece	3,39	3,4	5,4	3,25	3,34	3,2	5,27	3,48	4,58
Hungary	3,12	3,21	5,56	3,53	3,35	3,43	5,25	4,08	4,79
Ireland	4,30	3,98	5,15	4,63	4,96	4,36	5,14	3,21	3,92
Italy	3,79	3,25	5,43	3,68	3,63	3,58	4,94	3,24	4,07
Netherlands	4,70	4,61	4,11	4,46	3,86	4,32	3,70	3,50	4,32
Poland	3,62	3,11	5,10	4,53	3,61	3,89	5,52	4,02	4,06
Portugal	3,91	3,71	5,44	3,92	3,91	3,60	5,51	3,66	3,65
Slovenia	3,78	3,59	5,33	4,13	3,79	3,66	5,43	3,96	4,00
Spain	3,97	3,51	5,52	3,85	3,32	4,01	5,45	3,01	4,42
Sweden	5,32	4,39	4,85	5,22	4,10	3,72	3,66	3,38	3,38

Table 75: Cultural Variables of GLOBE II – Values; Source: Authors' compilation based on GLOBE (2020)

Country	Uncertainty Avoidance Societal Values	Future Orientation Societal Values	Power Distance Societal Values	Collectivism I Societal Values (Institutional Collectivism)	Human Orientation Societal Values	Performance Orientation Societal Values	Collectivism II Societal Values (In-group Collectivism)	Gender Egalitarianism Societal Values	Assertiveness Societal Values
Austria	3,66	5,11	2,44	4,73	5,76	6,10	5,27	4,83	2,81
Czech Republic	3,64	2,95	4,35	3,85	3,39	2,35	4,06	3,78	4,14
Denmark	3,82	4,33	2,76	4,19	5,45	5,61	5,5	5,08	3,39
Finland	3,85	5,07	2,19	4,11	5,81	6,11	5,42	4,24	3,68
France	4,26	4,96	2,76	4,86	5,67	5,65	5,42	4,40	3,38
Germany	3,32	4,85	2,54	4,82	5,46	6,01	5,18	4,89	3,09
Greece	5,09	5,19	2,39	5,40	5,23	5,81	5,49	4,89	2,96
Hungary	4,66	5,7	2,49	4,50	5,48	5,96	5,54	4,63	3,35
Ireland	4,02	5,22	2,71	4,59	5,47	5,94	5,74	5,14	3,99
Italy	4,47	5,91	2,47	5,13	5,58	6,07	5,72	4,88	3,82
Netherlands	3,24	5,07	2,45	4,55	5,20	5,49	5,17	4,99	3,02
Poland	4,71	5,20	3,12	4,22	5,30	6,12	5,74	4,52	3,90
Portugal	4,43	5,43	2,38	5,30	5,31	6,40	5,94	5,13	3,58
Slovenia	4,99	5,42	2,57	4,38	5,25	6,41	5,71	4,83	4,59
Spain	4,76	5,63	2,26	5,20	5,69	5,80	5,79	4,82	4,00
Sweden	3,60	4,89	2,70	3,94	5,65	5,80	6,04	5,15	3,61

Table 76: Religious Level Data for Europe; Source: Authors' compilation based on Bundeszentrale für politische Bildung (2019)

Country	Christians	Catholics	Protestants	Orthodox	Other Christians	No Religion	Religious Majority
Austria	79,6%	71,9%	5,7%	1,0%	1,0%	13,0%	Catholic
Belgium	52,5%	50,0%	1,7%	0,8%	0,0%	41,8%	Catholic
Bulgaria	80,2%	0,4%	1,0%	78,2%	0,6%	8,1%	Orthodox
Croatia	91,3%	86,3%	0,3%	4,4%	0,3%	4,6%	Catholic
Czech Republic	27,1%	24,9%	1,9%	0,3%	0,0%	71,0%	No Religion
Denmark	78,1%	0,8%	74,3%	0,0%	3,0%	16,7%	Protestant
Estonia	29,1%	1,3%	11,4%	16,4%	0,0%	68,8%	No Religion
Finland	80,6%	50,0%	74,8%	1,1%	4,2%	16,6%	Protestant
France	42,8%	40,0%	1,7%	0,3%	0,8%	50,5%	No Religion/Catholic
Germany	61,4%	30,2%	29,2%	1,6%	0,4%	33,1%	No Religion/Catholic/Protestant
Greece	92,2%	0,6%	0,2%	91,3%	0,1%	4,6%	Orthodox
Hungary	53,6%	40,8%	12,7%	0,1%	0,0%	45,3%	No Religion / Catholic
Ireland	90,4%	84,2%	3,8%	1,0%	1,4%	6,1%	Catholic
Italy	87,8%	86,0%	0,7%	0,5%	0,6%	10,3%	Catholic
Latvia	60,7%	19,4%	21,6%	19,2%	0,5%	39,4%	No Religion/ Protestant/Catholic/Orthodox
Lithuania	85,3%	80,3%	0,5%	4,5%	0,0%	14,0%	Protestant
Luxembourg	76,9%	72,0%	2,2%	0,5%	2,2%	19,0%	Catholic
Netherlands	48,0%	28,0%	20,0%	0,0%	0,0%	46,0%	No Religion
Poland	96,7%	96,0%	20,0%	40,0%	10,0%	2,6%	Catholic
Portugal	84,2%	81,0%	0,8%	0,6%	1,8%	6,8%	Catholic
Romania	97,0%	5,6%	4,6%	85,3%	1,5%	1,1%	Orthodox
Slovakia	80,6%	69,4%	7,9%	1,0%	2,3%	16,7%	Catholic
Slovenia	69,3%	66,1%	0,8%	2,1%	0,3%	25,7%	Catholic
Spain	72,9%	70,0%	0,7%	0,9%	1,3%	23,6%	Catholic
Sweden	62,0%	1,3%	57,5%	0,8%	40,0%	33,6%	Protestant

Table 77: Median Income; Source: Authors' compilation based on Bundeszentrale für politische Bildung (2019)

Country	Median Income	Country	Median Income
Austria	24.752€	Italy	16.542€
Belgium	22.784€	Latvia	6.607€
Bulgaria	3.590€	Lithuania	6.134€
Croatia	6.210€	Luxembourg	36.076€
Czech Republic	8.282€	Netherlands	23.561€
Denmark	29.383€	Poland	5.945€
Estonia	9.384€	Portugal	9.071€
Finland	23.987€	Romania	2.742€
France	22.077€	Slovakia	7.183€
Germany	21.920€	Slovenia	12.713€
Greece	7.600€	Spain	14.203€
Hungary	4.988€	Sweden	25.376€
Ireland	22.407€		

Table 78: Overview of the individual Firm Data from each country after evaluating the data of the main Cultural Models and Religion; Source: Authors' compilation

Country	Initial Data	Hofstede	Schwartz	GLOBE	Religion
Austria	727	627	627	627	627
Belgium	834	834	834	0	834
Bulgaria	1.334	1.330	1.330	0	1.330
Croatia	442	442	442	0	442
Czech Republic	928	914	914	914	914
Denmark	565	565	565	565	565
Estonia	255	255	255	0	255
Finland	411	409	409	409	409
France	1.587	1.586	1.586	1.586	1.586
Germany	7.658	3.540	3.540	3.540	3.540
Greece	328	328	328	328	328
Hungary	1.224	1.124	1.124	1.124	1.124
Ireland	162	137	137	137	137
Italy	6.149	6.144	6.144	6.144	6.144
Latvia	312	312	312	0	312
Lithuania	535	479	0	0	479
Netherlands	733	650	650	650	650
Poland	1.189	1.189	1.189	1.189	1.189
Portugal	1.594	1.594	1.594	1.594	1.594
Romania	1.796	1.796	1.796	0	1.796
Slovakia	6	6	6	0	6
Slovenia	328	328	328	328	328
Spain	2.200	2.200	2.200	2.200	2.200
Sweden	833	894	894	894	894
Total	32.197	27.783	27.304	22.329	27.783

Table 79. Descriptive Statistics of complete Firm Data; Source: Authors' compilation

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance		Skewness		Kurtosis	
					Statistic	Std. Error		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Revenue	27603	986304423,8	,00	986304423,8	24603316,86	224643,56	37322619,31	1392977912407069,	7,478	,015	104,22	,029	
Annual Profit	27783	177222994,98	-66799668,78	110423326,2	967960,59	20411,69	9223,37	11575433433998,50	8,053	,015	219,24	,029	
Balance Sheet Total	30087	1167801463,6	9223,37	1167817621,0	19730657,25	224284,33	38903473,18	1513480226175261,50	11,220	,014	200,49	,028	
Equity	30087	1550691918,6	-442448265,4	1108243653,20	9047012,45	140584,711	24385268,06	594641298519929,40	16,445	,014	469,75	,028	
Amount of Employees	32197	226,80	40,20	267,00	107,56	,26	46,65	2176,64	,928	,014	-,036	,027	
Debt Capital	30087	962706541,81	-9223,37	962654644,20	10791103,70	139368,06	24174233,74	584393577084138,60	15,214	,014	383,78	,028	
Total Debt Ratio	30087	561,26%	0,74%	562,00%	56,52%	0,15%	27,71%	768,14	2,170	,014	22,46	,028	
ROA	27783	489,26%	-287,90%	201,36%	5,05%	0,06%	10,55%	111,43	-3,34	,01	106,72	,029	
ROE	27781	16355,25%	-8629,16%	7726,09%	12,64%	1,26%	211,13%	44577,84	3,06	,01	572,51	,029	

Table 80: Pearson Correlation of complete Firm Data; Source: Authors' compilation

Variable	1.	2.	3.	4.	5.	6.	7.	8.
1. Revenue								
	Pearson Correlation							
	Sig. (2-tailed)							
2. Annual Profit	,380**							
	Pearson Correlation							
	Sig. (2-tailed)							
3. Balance Sheet Total	,664**	,441**						
	Pearson Correlation							
	Sig. (2-tailed)							
4. Equity	,466**	,527**	,805**					
	Pearson Correlation							
	Sig. (2-tailed)							
5. Amount of Employees	,311**	,129**	,244**	,186**				
	Pearson Correlation							
	Sig. (2-tailed)							
6. Debt Capital	,608**	,233**	,812**	,413**	,205**			
	Pearson Correlation							
	Sig. (2-tailed)							
7. Total Debt Ratio	,024**	-,181**	-,045**	-,218**	-,023**	,147**		
	Pearson Correlation							
	Sig. (2-tailed)							
8. ROA	,027**	,364**	-,017**	,059**	-0,008	-,087**	-,397**	
	Pearson Correlation							
	Sig. (2-tailed)							
9. ROE	0,001	,061**	-,014*	-0,007	-0,007	-,016**	0,011	,130**
	Pearson Correlation							
	Sig. (2-tailed)							
		0,852	0,018	0,263	0,255	0,007	0,076	0,000

** $p < .01$

