

*Andrzej Buszko*

*Pomeranian University in Slupsk*

*buszko@uwm.edu.pl*,  <https://orcid.org/0000-0003-0600-4646>

## The role of religion in shaping shadow economy level. The case of Polish regions

**Abstract:** Manuscript examines the relationship between religiosity and the shadow economy across Polish regions. Both religiosity and the shadow economy levels vary significantly among these regions. The Spearman correlation coefficient index was employed to assess the dependence between these variables. The results indicate a positive correlation (0.108;  $p < 0.1$ ) between religiosity and the shadow economy. The level of the shadow economy was estimated using the MIMIC (Multiple Indicators Multiple Causes) approach, while religiosity data were sourced from the 2021 National Census. Although religion can shape societal morality, it appears to be less effective in reducing the shadow economy.

**Keywords:** religion, economics, shadow economy, regions, relation

**JEL code:** H1, E2, A1

### Introduction

Religion holds a significant place in many societies, and Poland is no exception. Historically and presently, religion continues to play an important role in shaping social behaviour. It can be regarded as a social phenomenon, providing a broad range of values that influence individual and collective conduct. Many societies demonstrate strong adherence to religious doctrines, which are reflected in everyday life, including economic activities. Despite variations in religious models and their societal roles, the influence of religion should not be overlooked. When religion plays a pivotal role in a country, policymakers often attempt to leverage this sociological factor. Religious adherents may support the government, ignore it, or even oppose official authorities, which cannot be ignored in governance and social analysis. The influence of clergy can be particularly strong when religious leaders skilfully guide societal behaviour. Devout individuals often seek support and guidance from their faith, with religion serving as a source of behavioural norms. Moreover, older generations frequently oversee religious observance not

only within families but also among friends and neighbours. In some countries, religion receives support not only from devout individuals but from society at large, especially when religious authorities uphold universal values and traditions. Such attitudes have occasionally contributed to restoring democracy and condemning oppressive regimes. In certain states, religious leaders occupy governmental positions and attempt to introduce regulations aligned with religious doctrines. In many countries, including Poland, religious values are generally embraced by the population. Christianity, for instance, emphasizes honesty, social solidarity, and loyalty to the state, implying that Christians should obey the law and fulfil their civic duties. So, religion remains as undisputable aspect of any human society. Consequently, Christians may be less inclined to engage in the shadow economy. The shadow economy exists in all countries but varies in size and form. While its primary causes are well recognized, new factors that foster shadow economic activity continue to emerge. Religion is one such factor that remains underexplored in the literature regarding its relationship to the shadow economy. This article aims to fill that gap by investigating the connection between religion and the shadow economy across Polish regions. Previous research predominantly links the shadow economy to factors such as:

- high tax levels,
- complex and non-transparent (sometimes contradictory) legal systems,
- weak institutional frameworks,
- high social burdens,
- historical and national cultural contexts,
- high unemployment rates,
- low tax morale,
- corruption,
- specific sectoral characteristics (e.g., construction, agriculture, tourism, entertainment, services),
- economic cycles,
- organized crime (Buszko 2019).

Although the effects of the shadow economy are diverse, it is generally regarded as a detrimental phenomenon to economic development. It hampers growth, raises interest rates, reduces entrepreneurship and fair competition, lowers innovation, diminishes company and national assets, affects liquidity, and increases government debt. Conversely, some scholars argue that the shadow economy can act as a 'financial cushion' during recessions and periods of high unemployment by providing jobs for the unemployed. The low entry costs associated with shadow economic activities allow entrepreneurs to test business models with limited risk. Successful ventures may later transition to the formal economy. The shadow economy also serves as a barometer of economic governance: a high level indicates that policymakers may have implemented ineffective reforms, signalling the need for corrective measures. Despite this significance, few studies have addressed the role of religion in shaping the shadow economy, especially within the Polish context. This research seeks to address this gap by analysing the relationship between religiosity and the shadow economy across Poland's regions.

## Literature review

Religion shapes social dynamics by providing values that influence not only the behaviour of devoted individuals but, in many cases, entire societies. Although numerous types of religions exist, their role in every country cannot be ignored. The impact of religion varies depending on the number of religious adherents and the specific religion practiced. Becke (1996) investigated Hinduism and emphasized the key concept of rebirth, where an individual's status in a new life depends on their actions in the previous one. Proper conduct leads to a more prosperous new life, while bad deeds have the opposite effect. In Saudi Arabia, Islam is the official religion, and both law and economic activities are generally governed by Shari'ah rules. Muslim scholars widely agree that religion, as an established institution, plays a crucial role in shaping the socio-economic structure of an Islamic state (Khawaja et al. 2016). Many scholars share similar views regarding predominantly Christian countries. Conversely, a process of *atheization* is observed, especially among younger generations in developed countries. Some academics argue that religion, particularly Catholicism, has hindered economic development due to its adherence to traditional values and beliefs, contrasting with the more economically dynamic evangelical perspective. Nevertheless, Catholicism remains influential in many European countries, including Poland, Spain, Portugal, Italy, and Malta. Governments in these countries often support Catholic education, and society tends to follow the guidance of Catholic authorities. Popes have frequently expressed opinions on social and economic issues. For instance, Pope John Paul II authored numerous works highlighting economic and social challenges. In "Sollicitudo rei socialis", he emphasized solidarity as a cornerstone of social life, urging the wealthy to consider the needs of the poor. Unresolved inequality breeds dissatisfaction, crime, and the erosion of social norms, while many lack access to education, healthcare, sufficient food, or security. For many believers, these teachings form the ethical foundation for daily life. Catholicism has notably supported concepts like social and sharing economy and corporate social responsibility, emphasizing the primacy of human dignity and the need to address social inequality and poverty. However, Tuszynski and Block (2014) recalled that during medieval times many popes were corrupt, and Catholic values were often perceived as empty slogans, factors that contributed to the Protestant Reformation. Alexandrin and Zech (1999) connected neoclassical economics with Christian and Buddhist principles, noting that Buddhism tends to be more tolerant of business activity by openly accepting diversity and condemning greed. Schneider et al. (2015) published a significant study titled "Religion and Shadow Economy", analysing 161 countries. They used variables such as the Gallup religiosity index, monthly mass attendance (% of the population), and belief in heaven (% of the population). Employing the MIMIC approach to estimate the shadow economy as a percentage of GDP, the authors confirmed that religion provides important ethical norms. However, their empirical results revealed that more religious countries exhibited higher levels of shadow economy, as believers often supported informal transactions. Notably,

Protestant countries showed lower levels of shadow economy than Orthodox Christian countries, indicating that different religions have varying attitudes toward the shadow economy. Torgler (2006) examined the relationship between tax morale and religion, finding that Catholics, Hindus, and Buddhists exhibit higher tax morale compared to those without religious affiliation. In contrast, Orthodox Christians and Protestants showed lower tax morale than nonbelievers. Muslims and Jews displayed roughly similar attitudes toward the shadow economy. Religion also affects firm performance. Usman et al. (2023) found that firms operating in religiously diverse countries with fewer religious restrictions tend to be more innovative. Moreover, secularization creates more business opportunities compared to traditional religious societies. Alvey (2005) noted that globalization supports secularization and seeks to reduce barriers to business activity. Perez-Villadoniga et al. (2014) found no universal religious pattern influencing the behaviour of workers or business owners; even individuals within the same religious community may behave differently. Oslington (2000) demonstrated a close link between religion and normative social theory, which centres on values and social justice. When these aspects are ignored, society may experience serious problems, including an expansion of the shadow economy. Gill et al. (2018) confirmed that religion influences business decisions, particularly in the insurance market, where higher religiosity correlates positively with insurance purchasing decisions. Similarly, Mahdzan et al. (2023) studied Malaysia's borrowing sector and found that devout individuals tend to be less materialistic and more modest in consumption. Rashid et al. (2021) explored tax morality and religiosity in OECD countries, concluding that tax evasion is lower where religiosity and governance quality are high. Nitsch (1988) offered an interesting perspective aligned with the works of de Coux (1832) and de Villeneuve Bargemont (1834), emphasizing the importance of genuine beliefs and values and the necessity of living by them daily. Any deviation undermines trust in faith, requiring consistent behaviour. Barro and McCleary (2003) analyzed the role of religion in economic development and found no significant relationship between religion and economic performance. They noted that the shadow economy tends to be pro-cyclical – growing with GDP increases. Alesina and La Ferrara (2002) emphasized trust as a key factor fostering social capital, which is essential for development. Religion, rooted in trust and human relationships, supports community cohesion. Helble (2007) also expressed a positive view, suggesting religion creates valuable attributes that enhance cooperation, thereby increasing social capital and benefiting society's economic outcomes. While the causes and effects of the shadow economy are well-studied, less attention has been paid to values, beliefs, and religion as factors shaping shadow economy performance. Generally, religion provides valuable economic features and is regarded in many social theories as a key force for social order. Robbins (2004) noted that even in highly religious societies, a certain tolerance for illegal activities exists, raising questions about the level and types of acceptance. Mahmood (2005) highlighted another issue: members of the same religion may more easily accept prohibited acts committed by co-religionists than by outsiders. This double standard can

encourage prohibited behaviours, especially in Christianity and notably in Catholicism, where confession offers a path to absolution. Protestants tend to be more rigorous, believing that salvation requires lifelong demonstration of adherence to religious values (Geertz 1973). Rudnyckyj (2024) raised interesting issue related to the society affected by many different religions. The values of them are spread among believers, but society in general terms, it is tailored by the most popular and influential religion. There are many different religions in Poland, but the dominant role is occupied by Roman Catholic Church. Following above mentioned assumption Roman Catholic devotees should be taken into consideration whenever religiosity, faith, and on their basis, specific behaviour will be analysed.

## Methodological approach

The three goals are adopted in the research. One main and two subsidiary goals. The main goal is to indicate the dependence between the level of shadow economy and religiosity in Polish regions. Two subsidiary goals refers to identification the level of shadow economy in Polish regions and the level of religiosity. In fact the term region is used as the synonymous to the word voivodeship (province). The level of religiosity is understand as the declaration of interviewed on their religion. Since there are many different definitions of shadow economy like: informal, underground, non-observed, non-registered, non-declared, illegal, hidden, black economy. For this study shadow economy is understand as such an economic activity which is not taxed, not declared, lowering budget revenues and does not legitimately support GDP growth. The official data (done by GUS – Main Statistical Office) are provided for voivodeship not strictly for the regions (Mayer 1999). Regions can be characterized by many factors like: history, culture, geography etc. For example in Warminsko-mazurskie voivodeship three regions can be distinguished: Powiśle, Mazury and Warmia region. Each one was shaped by different history, culture, language – its own characteristic dialect, and is located in a specific place in the province. In Pomorskie Kaszuby and Kociewie as regions might be analysed separately. Similar situation can be observed in each single Polish voivodeships. Following hypothesis was assumed (H0):

There is a strong negative correlation between the level of religiosity and shadow economy in Polish regions. The Spearman correlation index was used to verify this hypothesis. It was calculated based upon following formula:

$$\sigma = \frac{6\sum d^2}{n(n^2 - 1)}$$

- H0 : r (X, Y) = 0 ; lack of correlation
- H0 : r (X, Y) ≠ 0 ; there is a correlation between analysed data.

The level of shadow economy was set up employing MIMIC (*Multiple Indicators Multiple Causes*) approach. The idea is based on Linearly Structural Equation Models (*LSEM*). Thanks to this approach shadow economy is understood as a latent variable and it is identified by such equation:

$$\eta = y_1x_1 + y_2x_2 + \dots + y_nx_n + \zeta$$

where:  $\eta$  is a latent variable : it means the shadow economy.  $y$ : denotes scalar structural coefficients,  $x$ : embodies vectors of explanatory (causal) variables, and  $\zeta$  represents the residual vector (i.e., the structural model's error term). To assess the stationarity of the time series in the collected dataset, the Dickey-Fuller test with generalized least squares (DF-GLS) was applied. Based on this approach, it was determined that at a significance level of  $p < 0.05$ , the time series representing the analyzed variables in individual region (voivodeship) meet the condition of stationarity. Therefore, the logarithmic transformation of the time series was omitted. *Statistica* software was employed in calculation. Subsequent explanatory (casual) variables were taken into an account:

Unemployment rate, criminality level, level of investment, consumption, medium salary, price of goods and services, share of construction and agriculture in regional GDP, number of small and medium companies. The MIMIC approach requires to indicate known variables, and based on them latent figure (shadow economy) can be measured. Those casual variables support shadow economy performance and they are widely recognised and accepted in literature (Belev 2003, Dell'Anno 2007, Buehn, Schneider 2012).

The data concerning the level of religiosity across different regions of Poland was derived from the national census conducted in 2021. Due to the fact that an overwhelming majority of respondents (71.3%) identified as Roman Catholic, this religious affiliation was included in the analysis. The level of religiosity is understood as the declaration of interviewed on their affirmation. The level of religiosity in analysed regions includes Roman Catholic Devotees only. Consequently, whenever religiosity is discussed, it refers to Roman Catholic Church. Other religions were declared by less than 1% of respondents. So, it was assumed that the other types of religions do not play important role in shaping society (as a whole) behaviour. From the other hand such believers can be very tightly connected with principles of the their religion and even follow them strictly, but of relatively small number of devotees, make them marginal influencing factor of society performance. It is also worth noting that nearly 20% of individuals surveyed declined to answer the question regarding their religious affiliation (<https://stat.gov.pl/spisy-powszechnie/nsp-2021/nsp-2021-wyniki-ostateczne/>; access: 14.05.2025). This figure can include not only non-believers, agnostics, but also believers who, for various reasons, did not want to disclose their faith. Anyway the number of declared devotees still remains high and it is sufficient to conduct the research (Rao 2017). Data regarding the estimation of the shadow economy was obtained from the Central Statistical Office (GUS) – precisely, from the Voivodeship Statistical Yearbooks. The shadow economy for each voivodeship

was calculated for the year 2021. Such a step was done in order to examine both variables – the level of the shadow economy and the *level of religiosity* – at the same time.

## Findings

The level of religiosity varies significantly across Polish regions. The highest religiosity was observed in Podkarpackie at 86.2%, while the lowest was in Zachodniopomorskie at 65.5%. Figure 1 illustrates the distribution of religiosity across the regions.

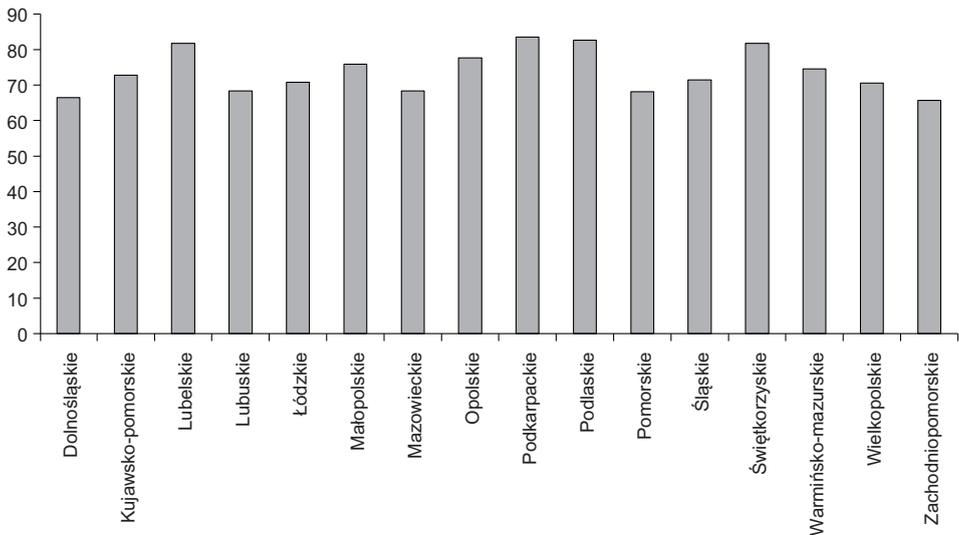


Fig. 1. The level of religiosity among Polish regions in 2021 (%)

Source: <https://stat.gov.pl/spisy-powszechne/nsp-2021/nsp-2021-wyniki-ostateczne/> (access: 14.05.2025).

Regions such as Lubelskie, Podlaskie, and Świętokrzyskie also reported a relatively high proportion of Roman Catholic respondents, exceeding 82%. Conversely, Mazowieckie, Pomorskie, and Lubuskie had notably lower religiosity levels, with fewer than 70% identifying as Roman Catholic. The level of shadow economy also varies widely among Polish voivodeships (see Fig. 2).

Lubuskie recorded the highest shadow economy level, at 33.1% of regional GDP. Lubelskie and Podlaskie followed closely, with shadow economies exceeding 30% of their regional GDP. In contrast, Wielkopolskie, Opolskie, and Małopolskie exhibited the lowest levels, each under 10%. Employing the Spearman coefficient index, the correlation between shadow economy levels and religiosity was calculated as 0.108 ( $p < 0.1$ ). This indicates a weak but positive correlation between religiosity and the shadow economy in Polish regions.

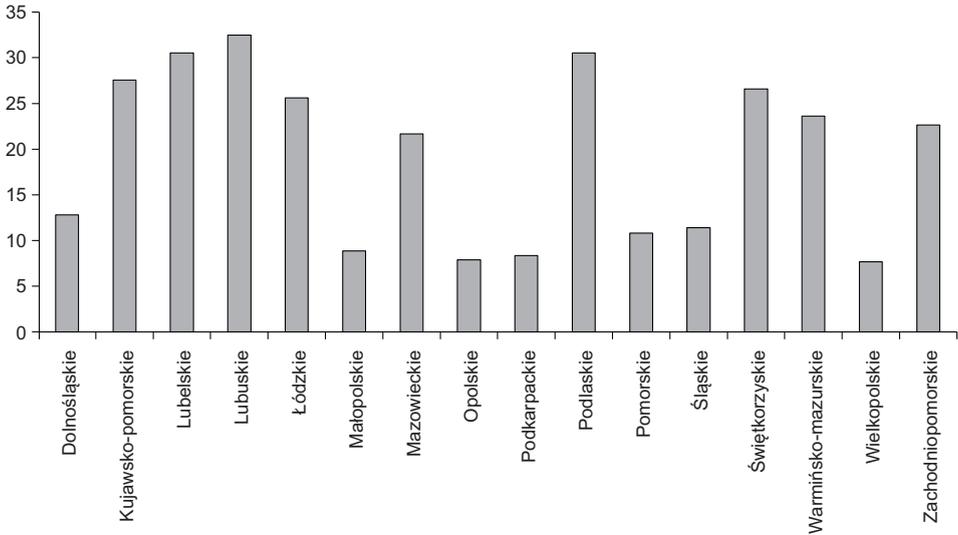


Fig. 2. The level of shadow economy in Polish regions in 2021 (% of regional GDP)  
Source: own calculation.

## Discussion

The findings suggest that religiosity in Polish regions does not necessarily limit the extent of the shadow economy. In fact, some interpretations might argue that religiosity could even support the development of shadow economic activities. However, this requires further explanation.

First, a declared attachment to religion does not always equate to strict adherence to religious principles. Even individuals engaged in criminal behavior often profess religious beliefs. The Roman Catholic faith, dominant in Poland, explicitly calls for lawful behavior, and virtually all legal violations, including participation in the shadow economy, can be regarded as sinful. Yet, the shadow economy persists, eroding social solidarity and deepening divisions between law-abiding citizens and those who flout the law. The Catholic Church traditionally emphasizes social justice, solidarity, and the moral imperative to care for the poor and marginalized.

Another aspect to consider is the effectiveness of religious institutions in addressing social issues. The Catholic Church in Poland faces challenges in engaging broad social groups across voivodeships, partly because societies are evolving and increasingly critical of traditional institutions. Large segments of the population no longer participate regularly in religious ceremonies, which limits the Church's influence.

Regional diversity also plays a significant role in shaping attitudes towards law and religion. Regions that were once under Russian partition – such as Lubelskie, Podlaskie, Świętokrzyskie, and parts of Mazowieckie – show persistently high religiosity but also deep-seated mistrust toward authority. This mistrust

contributes to a fertile ground for shadow economy activities. The Church's historical role during the partitions, upholding Polish traditions and patriotic values, partly explains its strong presence in these regions.

A notable exception is Podkarpackie, which combines high religiosity with a relatively low level of shadow economy. Podkarpackie is economically less developed but socially stable and traditional, with populations that have lived in the area for generations. This traditionalism and religiosity might contribute to lower shadow economic activity. On the other hand, Wielkopolskie is economically advanced, maintains a strong respect for legal norms, and also exhibits high religiosity, factors that may explain its similarly low shadow economy level.

The Catholic Church's historical and cultural roots in Poland frame it as a relatively liberal and forgiving institution, especially toward minor offenses. Activities within the shadow economy are often perceived as "minor offenses" or even as acts of economic necessity – such as providing employment during high unemployment periods. This moral relativism may contribute to a tacit acceptance or underestimation of the shadow economy's social harm.

Few analyses approach the shadow economy from a religious perspective, particularly regarding its connections to more serious crimes such as corruption. Yet the shadow economy may represent a starting point for escalation toward such detrimental phenomena.

The Catholic Church has many well-educated clergy who are capable of diagnosing social problems and have historically taken clear stances on major national issues (e.g., political transformation in 1989, EU accession). However, the shadow economy has not been widely condemned by the Church. This may lead some entrepreneurs operating in the informal sector to seek moral justification through their religious affiliation. Moreover, financially successful individuals involved in shadow activities sometimes support charitable initiatives such as Caritas, further complicating the moral narrative.

Importantly, the Church does not reject individuals based on past wrongdoing, which may encourage declarations of religiosity even among those engaged in illicit economic activities. This dynamic makes the shadow economy a complex social phenomenon, not easily categorized in black-and-white moral terms.

Lastly, the shadow economy can also be viewed as a symptom of weak institutional frameworks and ineffective government reforms. When the shadow economy remains at relatively low or controlled levels, Church authorities may choose not to interfere, seeing the matter as within the remit of governmental responsibility.

## Conclusions

The shadow economy is a complex phenomenon that requires an interdisciplinary approach to fully understand and address. It exists in every region of Poland, although its scale varies significantly. While the analysis shows some correlation between the level of religiosity and the shadow economy, it cannot be concluded

that religious or devoted individuals actively support the growth of the shadow economy. For instance, in regions like Podkarpackie, where religiosity is very high, the shadow economy remains relatively low. However, overall, religiosity does not appear to reduce the prevalence of the shadow economy. The primary responsibility for controlling the shadow economy lies with the government. When institutional frameworks are strong and economic reforms are effectively implemented, the shadow economy tends to occupy a smaller share of regional economic activity. The Catholic Church can influence societal morality by supporting or condemning various behaviours. Activities clearly harmful to society are easier for the Church to identify and oppose. However, because the shadow economy is largely “invisible” and its effects are ambiguous, individuals involved may not feel that they are violating official regulations or acting immorally. This lack of awareness is likely reinforced when Church authorities do not explicitly address the shadow economy, leaving their followers without clear moral guidance on this issue. Therefore, clearer and more direct engagement from religious institutions regarding the shadow economy could contribute to shaping more conscientious attitudes and behaviours in society.

### Conflict of interest

The author declare no conflict of interest and assures that the work is the result of his own creation.

### Literatura / References

- Alesina A., La Ferrara E. 2002. Who Trusts Others? *Journal of Public Economics*, 85(2): 207–234.
- Alexandrin G., Zech C.E. 1999. Ancient futures: papal and Buddhist economics. *International Journal of Social Economics*, 26, 10/11: 1344–1353 (<https://doi.org/10.1108/030682999102234>).
- Alvey J.E. 2005. Economics and religion: Globalization as the cause of secularization as viewed by Adam Smith. *International Journal of Social Economics*, 32, 3: 249–267.
- Barro R.J., McCleary R. 2003. Religion and Economic Growth. *American Sociological Review*, 68(5).
- Becke A. 1996. *Hinduismus zur Einführung*. Junius, Dresden.
- Belev B. 2003. The Informal Economy in the EU Accession Countries: Size, Scope, Trends and Challenges to the Process of EU Enlargement. Center for Study of Democracy, Sofia.
- Buehn A., Schneider F. 2012. Shadow economies around the world: novel insights, accepted knowledge, and new estimates. *Int. Tax Public Finance*, 19: 139–171 (<https://doi.org/10.1007/s10797-011-9187-7>).
- Buszko A. 2019. The regional differentiation of shadow economy in Poland – the potential impact for development. *Zeszyty Naukowe SGGW – Ekonomika i Organizacja Gospodarki Żywnościowej*, March.
- De Coux Ch. 1832. *Essais d'économie politique*. Saavig Cours d'économie politique. Institut catholique de Lille, Lyon, manuscript (chapter 8/iii translated in Roggi, 1977).
- Dell'Anno R. 2007. The Shadow Economy in Portugal: An Analysis with the MIMIC Approach. *Journal of Applied Economics*, 10: 253–277.
- Geertz C. 1973. Religion as a Cultural System. [In:] *The Interpretation of Cultures: Selected Essays*. Basic Books, New York, p. 87–125.
- Gill A., Mand H.S., Biger N., Mathur N. 2018. Influence of religious beliefs and spirituality on decision to insure. *International Journal of Emerging Markets*, 13, 5: 780–800 (<https://doi.org/10.1108/IJoEM-07-2017-0235>).

- Helble M. 2007. Is God Good for Trade? *Kyklos*, 60(3): 385–413. <https://stat.gov.pl/spisy-powszechnne/nsp-2021/nsp-2021-wyniki-ostateczne/> (access: 14.05.2025).
- Khawaja M.J., Farooqi F.S., Azid T. 2016. Intergenerational transmission of religious capital in a developing country: A case study of District Multan (Pakistan). *Humanomics*, 32, 2: 189–204.
- Mahmood S. 2005. *Politics of Piety: The Islamic Revival and the Feminist Subject*. Princeton University Press, Princeton.
- Mahdzan N.S., Zainudin R., Shaari M.S. 2023. The influence of religious belief and psychological factors on borrowing behaviour among Malaysian public sector employees. *Asia-Pacific Journal of Business Administration*, 15, 3: 361–385 (<https://doi.org/10.1108/APJBA-10-2020-0362>).
- Mayer B. 1999. *Gospodarka przestrzenna. Mechanizmy rozwoju, teorie i systemy*. PTO, Szczecin.
- Nitsch T.O. 1988. Social Catholicism: Birth and Tradition of Solidarism. *International Journal of Social Economics*, 15, 9: 3–38 (<https://doi.org/10.1108/eb014118>).
- Oslington P. 2000. Religion and Economics: Normative Social Theory. *International Journal of Social Economics*, 27, 12: 1270–1282 (<https://doi.org/10.1108/ijse.2000.27.12.1270.5>).
- Perez-Villadoniga M.J., Prieto-Rodriguez J., Suarez-Pandiello J. 2014. Willingness to work and religious beliefs in Europe. *International Journal of Manpower*, 35, 1/2: 147–165 (<https://doi.org/10.1108/IJM-03-2014-0068>).
- Rao P. 2017. *Statistical Methodologies with Medical Applications*. John Wiley & Sons, Ltd. (<https://doi.org/10.1002/9781119258568>).
- Robbins J. 2004. The Globalization of Pentecostal and Charismatic Christianity. *Annual Review of Anthropology*, 33(1): 117–143.
- Rashid M.H.U., Buhayan M.S.A., Masud M.A.K., Sawyer A. 2021. Impact of Governance Quality and Religiosity on Tax Evasion: Evidence from OECD Countries. *Advances in Taxation*, 29: 89–110 (<https://doi.org/10.1108/S1058-749720210000029007>).
- Rudnyckij D. 2024. Spacing Ethics: Assembling the Anthropology and Geography of Religion, *Handbook of the Geographies of Religion* (1163–1174). ([https://doi.org/10.1007/978-3-031-64811-3\\_64](https://doi.org/10.1007/978-3-031-64811-3_64)).
- Schneider F., Linsbauer K., Heinemann F. 2015. Religion and Shadow Economy. *Kyklos*, 68, 1: 111–141.
- Torgler B. 2006. The Importance of Faith: Tax Morale and Religiosity. *Journal of Economic Behavior and Organization*, 61(1): 81–109.
- Tuszynski N., Block W. 2014. The principal – agent problem between the Pope and God: how the printing press saved the papacy. *Humanomics*, 30, 3: 275–284 (<https://doi.org/10.1108/H-07-2013-0044>).
- Usman M., Li C., Chaudhry N., Akhter W. 2023. Does religion impact corporate innovation in developing countries? *Journal of Islamic Accounting and Business Research*, 14, 6: 887–910.
- Villeneuve-Bargemont A. 1834. *Économie politique chrétienne, ou recherche sur la nature et les causes du paupérisme en France et en Europe*. Paulin, Paris.

## Rola religii w kształtowaniu poziomu szarej strefy. Przypadek polskich regionów

**Zarys treści:** W artykule podjęto próbę ustalenia związku pomiędzy poziomem religijności a szarą strefą w regionach Polski. Zarówno poziom religijności, jak i szarej strefy bardzo różni się w poszczególnych regionach. Indeks korelacji Spearmana został użyty do ustalenia związku pomiędzy badanymi kategoriami. Na podstawie wyniku (0,108;  $p < 0,1$ ) należy stwierdzić istotny pozytywny związek pomiędzy religijnością a poziomem szarej strefy. Poziom szarej strefy został ustalony za pomocą narzędzia MIMIC. Poziom religijności zidentyfikowano na podstawie danych z Narodowego Spisu z 2021 r. Religijność może kształtować moralność społeczną, ale okazuje się mniej efektywna w redukowaniu szarej strefy.

**Słowa kluczowe:** religia, gospodarka, szara strefa, regiony, relacja

Data przekazania tekstu: 15.09.2025; data zaakceptowania tekstu: 02.03.2026.

Article submitted: 15.09.2025; article accepted: 02.03.2026.