

IMPROVEMENT OF CORPORATE GOVERNANCE AS A RESULT OF CAPITAL MARKET DEVELOPMENT AND IMPROVEMENT OF THE LEGAL AND REGULATORY ENVIRONMENT IN THE REPUBLIC OF SERBIA

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Abstract: The framework of corporate governance in the Republic of Serbia is determined by relevant laws and by-laws. Today's regulations are on the trail of targeted European standards, and a bigger problem is manifested in their application than in the quality of individual legal solutions. With the primary goals of enhancing transparency and defending the interests of minority shareholders, pertinent legal measures have recently implemented additional requirements for public corporations as well as majority owners. The issue at hand is how much public company managers believe the legal and regulatory environment has improved corporate governance. On the other hand, the domestic capital market continued to flourish without receiving the crucial attention of the political and economic authorities. The Belgrade Stock Exchange, the sole operator of the regulated market and multilateral trading platform, is required to list all publicly traded firms in the Republic of Serbia's shares for trading on the exchange. The stock market in the Republic of Serbia still doesn't serve as a location for getting additional (equity or debt) capital, or only seldom does so, despite the undeniable advancements in the organisation and trading system. However, the arrival of new (institutional) investors on the Belgrade Stock Exchange brought changes and set new standards not only among direct market participants but also among managers and majority owners of public companies. For years, the reporting rules of public companies have been one of the regular obligations of their managers. It is important to know how much public company managers believe the growth of the stock market has contributed to better corporate governance.

Keywords: Corporate governance, capital market, agency problem, legal-regulatory environment

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1. Introduction

A series of interactions between a company's management, board of directors, shareholders, and other involved stakeholders is known as corporate governance. Corporate governance also offers a framework for deciding the company's objectives, as well as the methods for attaining them and keeping track of the outcomes. Effective monitoring should also be made possible by good corporate governance, which should guarantee that management is given the right incentives to pursue objectives that are in the best interests of the business and its shareholders. According to the OECD Principles of Corporate Governance from 2004, the existence of an efficient corporate governance structure within the economy as a whole aids in achieving the essential degree of trust for a market economy to operate effectively. Corporate governance, according to Gillan and Starks (Gillan & Starks, 1998), is a system of laws, regulations, and other elements that regulate how a corporation operates. According to Shleifer and Vishny (Shleifer & Vishny, 1997), corporate governance is the means by which company owners assure a return on their investments. The authors actually pose the question, "How do owners control managers?" Internal actors in the corporate governance system include managers acting as agents for shareholders, the board of directors charged with guiding and overseeing them, and employees; external participants include lenders of debt and equity capital as well as buyers and suppliers. The corporate governance system is a component of the larger social and economic environment, which is formed by the political climate, relevant markets, cultural influences, and legal and regulatory framework. For large organisations, separation of ownership and control is a universal phenomenon. At the same time, in the USA and other Anglo-Saxon nations, the board of directors and pressure from the stock market are used to govern huge public firms. The stock market is less significant in other nations (Europe, Japan, etc.), and the main shareholders—typically banks and other businesses—have influence (Brealey et al., 2001). However, the decisions made by the financial manager should be as if the decisions were made by the owners themselves. This typically indicates that financial managers should take actions that will increase the company's worth and, in turn, increase the owner's wealth (Brzaković, 2016).

In the case of companies in the Republic of Serbia, this paper attempts to establish the relationship between the Improvement of the Legal-Regulatory Environment (ILRE), the Development of the Capital Market (CMD), and the Improvement of Corporate Governance (ICG), as independent variables, and the latter as a dependent variable. The basic tasks of the research are defined as follows:

- Determine whether ILRE does not affect or affects ICG?
- Determine whether CMD, does not affect or affects ICG?
- Determine whether ILRE and CMD do not affect or affect ICG?

2. Determinants of corporate governance - literature review

In a now classic paper from 1997, La Porta and others, conclude that the legal environment is important for the size and scope of capital markets. In particular, because a sound legal framework shields potential inventors from entrepreneur expropriation, their willingness to invest in securities rises, supporting the expansion of the capital market. The study's findings also demonstrate that, when compared to common law nations, countries with civil law, particularly those with French civil law, have the least developed capital markets and the lowest investor protection (La Porta et al., 1997). In a paper from 2000, the same authors found differences in the capital market's breadth and depth, dividend policy, and the firm's access to outside sources of financing, as well as in the degree of legal protection provided to investors, shareholders, and creditors against expropriation by managers and controlling shareholders of companies. According to La Porta et al. (2000), an approach based on the traditional distinction between two

types of financial systems—bank-based and market-based types—is a better way to comprehend corporate governance and its reform. More than ten years later, the same course was taken in a research by Chung and others. This study demonstrates that companies in common law countries typically have superior corporate governance structures and more stock market liquidity than companies in civil law nations. The study also makes the case that corporations with a better governance structure have higher stock market liquidity than companies with a worse governance structure, regardless of whether the country in question has common law or civil law. The results indicate that strong shareholder rights protection enhances the effectiveness of corporate governance in increasing stock market liquidity, indicating a complementary relationship between the legal and regulatory environment for shareholder protection at the national level and good corporate governance at the company level (Chung et al., 2012).

Earlier (in 2003), Fauver and colleagues discovered that the value of business diversification is correlated with the level of capital market growth, international integration, and legal systems, using a database of more than 8,000 enterprises from 35 nations. The findings of this study imply that the value of diversity is significantly influenced by the financial, legal, and regulatory environment. Additionally, as compared to businesses operating in more industrialised and globally integrated nations, the ideal organisational structure and corporate governance may differ significantly for businesses operating in emerging markets (Fauver et al., 2003).

In this regard, the study (Ong & Iorgova, 2008) that examines the capital markets of developing European nations is useful to cite with reference to the practise and perspectives of corporate management in the Republic of Serbia. According to the report, in order to draw and keep investor interest, corporate governance, financial transparency, and legal and regulatory compliance must all be continually improved. Despite significant progress in the development of sound financial regulatory frameworks in these countries, success in transforming laws has not necessarily followed with their actual implementation. As a result, there are considerable regional differences in governance standards and financial transparency. Because institutional investors have historically been crucial to the growth of growing local markets, several markets in the region still don't have the required confidence (Ong & Iorgova, 2008). When evaluating the impact of institutional investors on corporate governance, however, caution should be exercised because not all institutional investors are the same; rather, there is significant heterogeneity among institutional investors as block owners (Dasgupta et al., 2021).

Numerous studies have been published in relation to institutional ownership, the impact of the capital market, and the ownership structure on corporate governance. According to authors Hartzel and Starks (2003), concentrated institutional ownership is favourably correlated with directors' fees that are sensitive to performance and adversely correlated with the amount of fees. According to study findings, institutions can help mitigate the agency issue between shareholders and management by acting as a watchdog (Hartzell & Starks, 2003). However, Voidtke (2002) claims that the supervisory role of institutions can be compromised, and other shareholders endangered, if institutions responsible for monitoring of management come into conflict with other shareholders. Bethel et al. (1998) demonstrate that activist block owners boost shareholder value, coming to the conclusion that the market for partial corporate control is crucial in reducing agency costs in US businesses.

In a 2008 study, Haque and coauthors explore the conceptual framework of the relationship between corporate governance and two crucial factors influencing the growth of the capital market: a company's financial success and its access to financing sources. The framework makes the assumption that a company's corporate governance is simultaneously influenced by a number of linked governance components and other firm-specific traits. Therefore, even while capital markets are important in raising corporate governance norms, weak corporate governance at the business level may limit the efficacy and legitimacy of such initiatives. The cause-and-effect

relationship can also go the other way; for instance, good corporate governance at the firm level can increase a company's access to funding sources and financial performance, which in turn promotes the growth of the capital market (Haque et al. 2008).

3. Determinants of corporate governance in the Republic of Serbia

Since price stability, monetary and fiscal stability, as well as a strong banking sector, serve as the foundation upon which individual capital markets can be developed, macroeconomic stability is frequently seen as the most crucial factor in the growth of the capital market. Macroeconomic stability is followed by the requirement to establish an efficient legal and regulatory framework. Experience confirms that lower transaction costs and lower risks of transactions on the capital market correspond to the economies with an efficient legal system, in which property rights are consistently protected.

The only organizer of the regulated market and multilateral trading platform in Serbia is the Belgrade Stock Exchange. Listing and Open Market are the two divisions of the regulated market. There are three quotations within the Listing segment: Prime Listing, Standard Listing and Smart Listing.

The initial momentum in stock exchange trading in the early 2000s, with annual turnover exceeding one billion euros, was a consequence of the initial ownership consolidation, which was realized on the Belgrade Stock Exchange. According to the provisions of the Privatisation Law, all firms in the Republic of Serbia that are listed on the stock exchange are "compulsorily listed" and do not consider this market to be their natural environment (Barjaktarovic Rakocevic & Rakoevi, 2005). In that early period, reprivatization took place at extremely low prices, so the stock market largely was used for the interests of the so-called tycoon capital. The introduction of new laws, as well as legal solutions that to a certain extent protect the rights of minority shareholders, followed only after these „tycoon“ interests were satisfied. For example, the first Law on Takeover[†], adopted in 2006, was characterized by numerous shortcomings and problems in implementation. Changes in takeover laws impact ownership and control as well as the degree of investor protection, the growth of the capital market, and the corporate control market (Dencic-Mihajlov, 2009). Before the start of the World Economic Crisis, the weaknesses and absence of sound foundations of the domestic capital market were clear. The stock market crash that followed was primarily a consequence of its inherent weaknesses, insufficient depth, liquidity, and transparency. From the consequences of the crash, the stock market has not recovered to this day. As the following picture shows, on the last trading day of 2022, the value of the index of the most liquid shares - Belex15 was 824.61, which is 35.6% of the value of this index at the end of 2007.

[†] Law on Takeover , " Official Gazette of the Republic of Serbia" no. 46/2006



Figure 1. Value of the Belex15 index on the last trading day, period 2005-2022
 Source: (Author, based on <https://www.belex.rs/trgovanje/indeksi/belex15/istorijski/3y>)

It is obvious that the domestic capital market has not been in the focus of economic and financial policy makers in the last three decades, so its marginal position in the financial system is largely a consequence of the said approach. In such conditions, the managers of most public companies do not perceive the presence on the stock exchange through the potential advantages of the listing; on the contrary, they accept it as an additional cost that they are forced to pay according to the law.

In general, how the capital market affects quality of corporate governance can be analyzed from different aspects. In the case of the domestic capital market, it is useful to look at the role of specialized participants that are providers of information in the capital market, on managerial incentives and mitigating the principal-agent problem. The study by Chung and Jo examines how stock analysts' marketing and supervisory efforts affect the market value of the company. It is predicated on the idea that stock analysts' monitoring of corporate performance improves managers' motivation and lowers the agency costs related to the separation of ownership and control. According to the study's findings (Chung & Jo, 1996), specific analyst activities have a favourable effect on the value of the company. It is also important to consider the relationship between corporate governance, market transparency, and corporate disclosure obligations. In a 2016 study, Beekes et al. look at a sample of more than 5,000 firms that were listed between January 1, 2003, and December 31, 2008, on stock exchanges in 23 different countries. The authors draw the conclusion that, despite the fact that companies with stronger management may publish information more frequently, this does not always imply that the knowledge is reflected in stock prices in a timely manner (Beekes et al., 2016).

Relevant laws and bylaws establish the regulatory framework for corporate governance in the Republic of Serbia.

The Companies Law[‡] defines four legal forms of companies. From the point of view of the joint stock company, the legal provisions regulating the status issues related to the joint stock companies including their establishment, operations, reorganization and liquidation, are important for the corporate governance system. The provisions of the Companies Law, which govern the management bodies of joint stock companies, their competencies and responsibilities, composition, and reciprocal relationships, as well as matters of exercising and defending shareholder rights, also place restrictions on the practise of corporate management. The Capital

[‡] Companies Law, "Official Gazette of the RS", no. 36/2011, 99/2011, 83/2014 - dr. Law 5/2015, 44/2018, 95/2018, 91/2019 and 109/2021

Market regulation is another important regulation that establishes the framework for corporate governance[§]. The processes for issuing and trading joint stock company shares on the stock market are governed by this law, as is the requirement to make public company information. Regulations on the content, format, and method of publication of annual, semi-annual, and quarterly reports of public companies are adopted by the Securities Commission, while business rules and listing regulations are adopted by the Belgrade Stock Exchange.

In addition to the relevant system laws and the aforementioned by-laws, many joint-stock companies define the system of corporate governance with internal acts (codes), by which they voluntarily assume additional obligations and principles of good corporate practice and organizational culture, especially in relation to the rights of shareholders and the manner of action of the management as holders of corporate governance.

Since Serbia's corporate governance regulations are now largely in line with the desired European norms, it is more difficult to implement them than to find weak legislative requirements. However, years have passed since the beginning of systemic changes in order to establish an adequate regulatory regime that does not slow down inflow of adequate information to the market, but rather promotes the obligation of disclosure for all listed companies. Most European nations in development and transition shared similar issues; Mishkin (2006) points out that these nations frequently had lax accounting standards, which made it much more difficult to assess the quality of financial reports and made the issues with asymmetric information more severe. The study by Malinić (2008) focuses on the practise of financial reporting and how it affects the standard of corporate governance. According to the study cited above, corporate financial reporting is crucial for reducing information asymmetry and ensuring that the capital market operates as intended (Malinić, 2008). Authors Bushman and Smith covered a related subject earlier (in 2001). They initially look at how financial accounting is used in management incentive schemes before suggesting further research that would include a more thorough examination of how financial accounting data is used in other corporate control mechanisms (Bushman & Smith, 2001). According to a study by Healy and Palepu from 2001, financial reporting and transparency could be crucial management tools for controlling external investors and displaying firm success. The competence and effectiveness of the judicial power is another significant issue of company governance that managers and shareholders in the Republic of Serbia view as contentious. Namely, experience shows that court cases are not resolved for years and that court decisions are sometimes made under the pressure of the executive authority (Čupić, 2010).

4. Research methodology

The research tasks are:

- Determine whether ILRE does not affect or affects ICG?
- Determine whether CMD, does not affect or affects ICG?
- Determine whether ILRE and CMD do not affect or affect ICG?

Auxiliary hypotheses in the research are:

- H01: ILRE, does not affect ICG.
- Ha1: ILRE, affects ICG.
- H02: CMD, does not affect ICG.
- Ha2: CMD, affects ICG.

The main null hypothesis is:

- H0: ILRE and CMD, do not affect ICG.

[§] Capital Market Law, " Official Gazette of the Republic of Serbia" no. 129/2021

- Ha: ILRE and CMD, affect ICG.

4.1. Research

Table 1 and Figure 2 show the basic descriptive statistics of the research for the sectors, namely: Manufacturing industry, hereafter - A (68, or 49.64% of the overall sample size of respondents - 137), Wholesale and retail trade, hereafter - B (39 or 28.47% of the overall sample size of respondents - 137) and Agriculture, forestry and fishing, hereafter - C (30, or 21.90% of the overall sample size of respondents - 137)

Table 1. Descriptive statistics by sectors

Sectors	Count	Prob
Manufacturing industry (A)	68	0.49635
Wholesale and retail trade (B)	39	0.28467
Agriculture, forestry and fishing (C)	30	0.21898
Total	137	1.00000

Source: Author

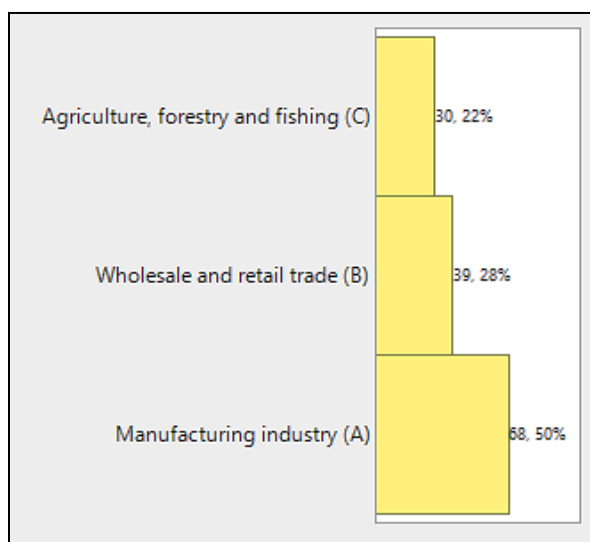


Figure 2. Descriptive statistics by sector

Source: Author

As noted, and for the sake of easier analysis and presentation: Improvements in the legal-regulatory environment are marked below with the abbreviation (ILRE), Capital Market Development with the abbreviation (CMD) and Improvement of Corporate Governance with the abbreviation (ICG). Correlation and regression analysis were employed in the study, and SAS JMP Pro 17 was used to handle the data. The paper used an electronic questionnaire in which personal views were to be given on the statements made. The respondents are managers of publicly traded businesses in the aforementioned categories, whose shares are traded on the Belgrade Stock Exchange (https://www.belex.rs/trzista_i_hartije/sektori). The positions are defined as follows:

- 1 – Totally unsatisfied,
- 2 – Partially dissatisfied,
- 3 – Neither dissatisfied nor satisfied,
- 4 – Partially satisfied and
- 5 – Completely satisfied.

The following table lists the claims about which the respondents declared.

Table 2. Independent and dependent variables and statements related to them

ILRE – Improvements in the legal and regulatory environment	
ILRE1	The standard of corporate governance is directly impacted by the quality of regulations and how regulators apply them.
ILRE2	The degree of information asymmetry is greatly reduced by the excellent corporate financial reporting.
ILRE3	Legal stability and the application of the law are requirements for a major institutional investor (and other) participation on the capital market.
ILRE4	The expertise and quality of the judiciary has a direct impact on the effectiveness of solving potential problems of corporate governance
CMD - Capital market development	
CMD1	Supervisory activities of stock and investment analysts additionally motivate managers and reduce agency costs
CMD2	A developed capital market and good mechanisms for informing the investment public are mutually dependent
CMD3	A developed capital market facilitates external financing and opens access to new institutional owners
ICG - Improvement of corporate governance	
ICG1	Improving corporate governance implies increasing responsibility and protection of minority shareholders and promoting adequate managerial incentives
ICG2	Improving corporate governance generates incentives for market participants in the direction of increasing market transparency and efficiency
ICG3	The expansion of overall economic performance is correlated with the strengthening of corporate governance.

Source: Author

Table 3 lists the statements for the independent variable ILRE along with their descriptive statistics.

Table 3. For the independent variable ILRE, descriptive statistics

	ILRE₁	ILRE₂	ILRE₃	ILRE₄
Mean	3.7226277	4.0364964	3.9927007	4.080292
Std Dev	1.0053528	0.8944992	0.9814182	0.9319366
Std Err Mean	0.0858931	0.0764222	0.0838482	0.0796207
Variance	1.0107342	0.8001288	0.9631816	0.8685058
Skewness	-0.959726	-1.07303	-0.885143	-0.935946
Kurtosis	0.5338202	1.2917462	0.276526	0.6311278

Source: Author

For the independent variable CMD, Table 4 lists the assertions and their descriptive statistics.

Table 4. For the independent variable CMD, descriptive statistics

	CMD₁	CMD₂	CMD₃
Mean	3.9854015	3.8394161	3.8759124
Std Dev	0.9313605	1.0588116	1.1274989
Std Err Mean	0.0795715	0.0904604	0.0963287
Variance	0.8674324	1.121082	1.2712538
Skewness	-0.857426	-0.766806	-0.751621
Kurtosis	0.286889	-0.462844	-0.711983

Source: Author

For the dependent variable ICG, Table 5 lists the assertions and their descriptive statistics.

Table 5. For the dependent variable ICG, descriptive statistics

	ICG ₁	ICG ₂	ICG ₃
Mean	4.0072993	3.7226277	3.9343066
Std Dev	0.9509774	1.0483175	1.0860369
Std Err Mean	0.0812475	0.0895638	0.0927864
Variance	0.9043581	1.0989695	1.1794762
Skewness	-0.951738	-0.432066	-0.741832
Kurtosis	0.5986311	-0.826438	-0.463485

Source: Author

4.2. Regression and correlation analysis for variables (ILRE - ICG)

The theoretical system model (1) is depicted in Figure 3. An independent variable (ILRE) and a dependent variable (ICG) make up the system model.

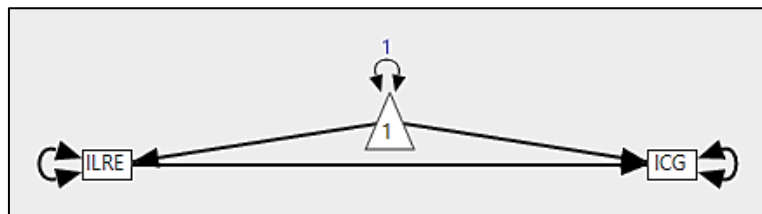


Figure 3. Theoretical system model (1)

Source: Author

The theoretical system model's (1) basic standard evaluation is depicted in Figure 4. With a coefficient of determination of 0.595796, the independent variable (ILRE) can account for 59.60% of the variation in the dependent variable (ICG). This leads us to the conclusion that there is a substantial correlation between the independent variable (ILRE) and the dependent variable (ICG), with a correlation value of 0.771878.

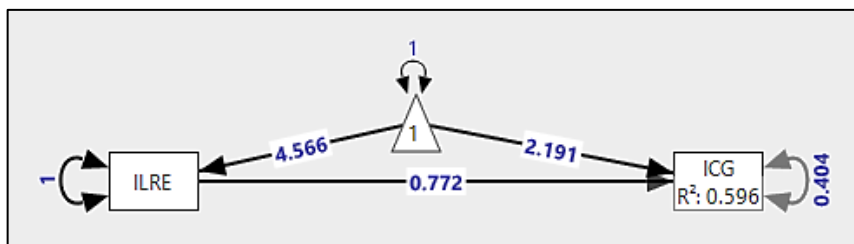


Figure 4. Standard sizes of the independent variable's (ILRE) contribution to the dependent variable's (ICG) in the theoretical system model (1)

Source: Author

Table 6 provides the statistical significance evaluation, which equals [F(1,135)=198.9899, p0,0001].

Table 6. ANOVA for variables (ILRE) i (ICG)

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	37.770484	37.7705	198.9899
Error	135	25.624488	0.1898	Prob > F
C. Total	136	63.394972		<0.0001

Source: Author

These findings support the proposed alternative hypothesis Ha1 that ILRE impacts ICG.

The established theoretical system model (1)'s non-standard contribution sizes are depicted in Figure 5.

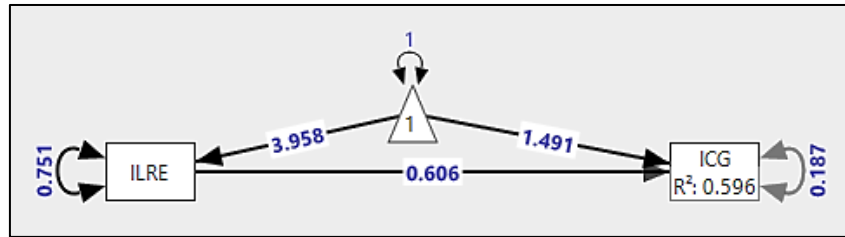


Figure 5. ILRE's (the independent variable's) non-standard size contribution to ICG (the dependent variable) in the theoretical system model (1)

Source: Author

The independent variable's grade (ILRE) has a mean value of 3.958. ICG (the dependent variable) has a variance of 0.19 while the independent variable has a variance of 0.75. The following regression equation (formula 1 and 2) can be created using the data provided:

$$y = 1.491 + 0.606 \cdot x_1 \quad (1)$$

or

$$ICG = 1.491 + 0.606 \cdot ILRE \quad (2)$$

The regression equation's diagram for the variables (ILRE) and (ICG) is shown in Figure 6.

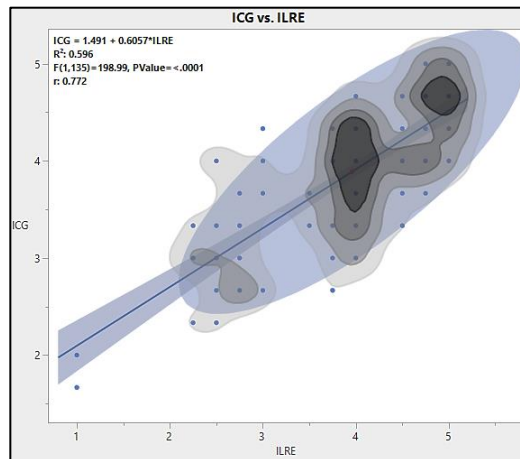


Figure 6. The regression equation's diagram (ICG)

Source: Author

The regression equation diagram for the variables (ILRE) and (ICG) for sectors A, B, and C is shown in Figure 7.

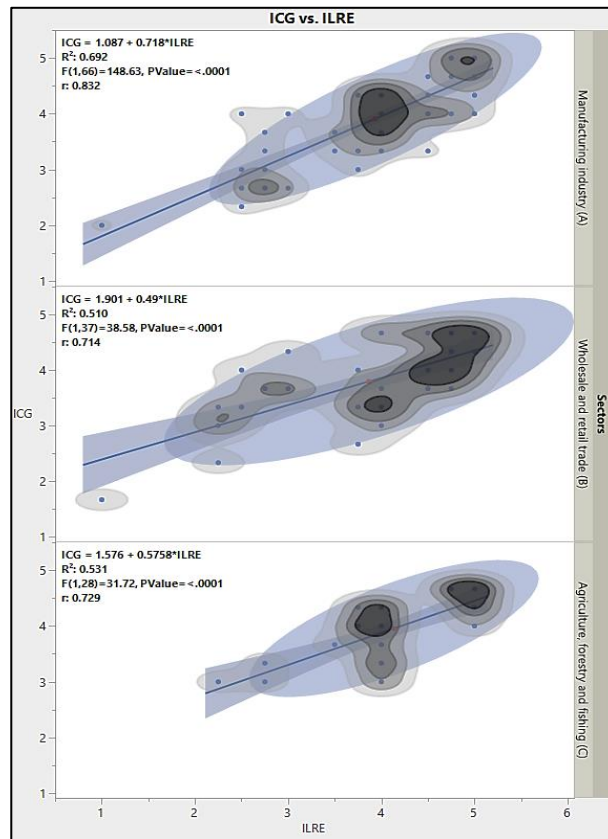


Figure 7. Diagram of the regression equation (ICG) for sectors A, B, and C
Source: Author

We can draw the conclusion that the variables (ILRE) and (ICG) have the strongest correlation, which is ordered A > C > B.

4.3. Regression and correlation analysis for variables (CMD - ICG)

The theoretical system model (2) is displayed in Figure 8. An independent variable (CMD) and a dependent variable (ICG) make up the system model.

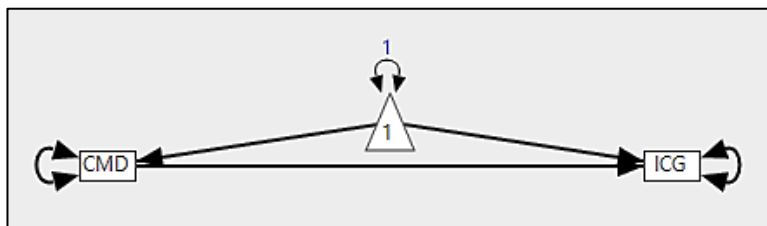


Figure 8. Theoretical system model (2)
Source: Author

The theoretical system model's (2) basic standard evaluation is depicted in Figure 9. With a coefficient of determination of 0.164865, the independent variable (CMD) may account for 16.50% of the variation in the dependent variable (ICG). This leads us to the conclusion that there is a somewhat weak correlation between the independent variable (CMD) and the dependent variable (ICG), with a correlation coefficient of 0.406035.

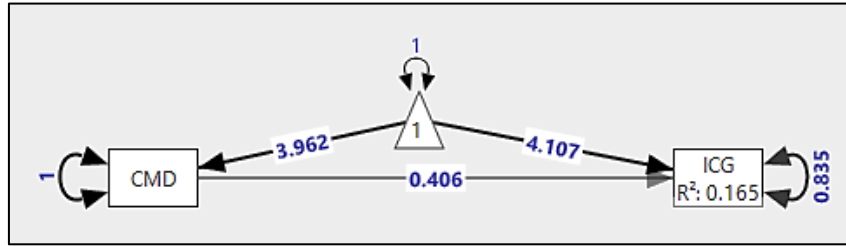


Figure 9. Standard sizes of the independent variable's (CMD) contribution to the dependent variable's (ICG) in the theoretical system model (2)

Source: Author

Table 7 provides the statistical significance evaluation, which is $[F(1,135)=26.6505, p<0.0001]$.

Tabela 7. ANOVA for variables (CMD) i (ICG)

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	10.451600	10.4516	26.6505
Error	135	52.943372	0.3922	Prob > F
C. Total	136	63.394972		<0.0001

Source: Author

These findings support the proposed alternative hypothesis Ha2, which is as follows: CMD impacts ICG.

The established theoretical system model (2)'s non-standard contribution sizes are depicted in Figure 10.

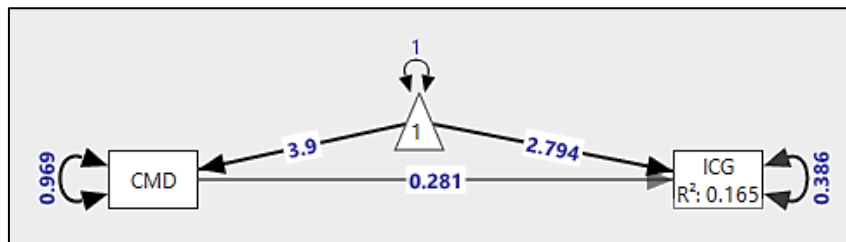


Figure 10. The theoretical system model's independent variable's (CMD) non-standard contribution sizes to the dependent variable's (ICG)

Source: Author

The independent variable's grade (CMD) has a mean value of 3.90. The dependent variable (ICG)'s variance is 0.386 whereas the independent variable's variance is 0.969. The supplied data can be used to create a regression equation (formulas 3 and 4), which says:

$$y = 2,794 + 0.281 \cdot x_2 \quad (3)$$

or

$$ICG = 2,794 + 0.281 \cdot CMD \quad (4)$$

The regression equation's diagram for the variables (CMD) and (ICG) is shown in Figure 11.

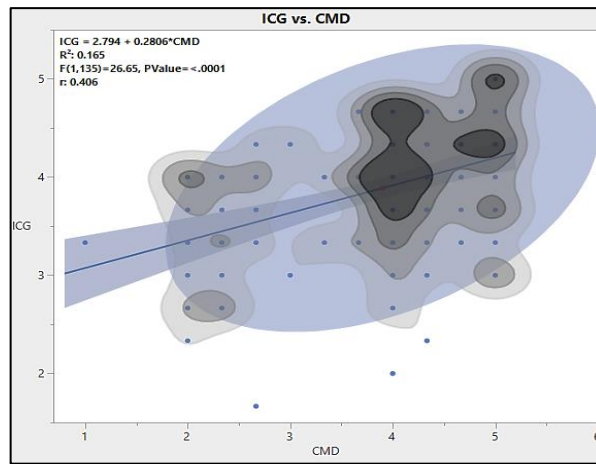


Figure 11. The regression equation's diagram (ICG)
Source: Author

Figure 12 depicts the diagram of the regression equation for the sectors A, B, and C variables (CMD) and (ICG).

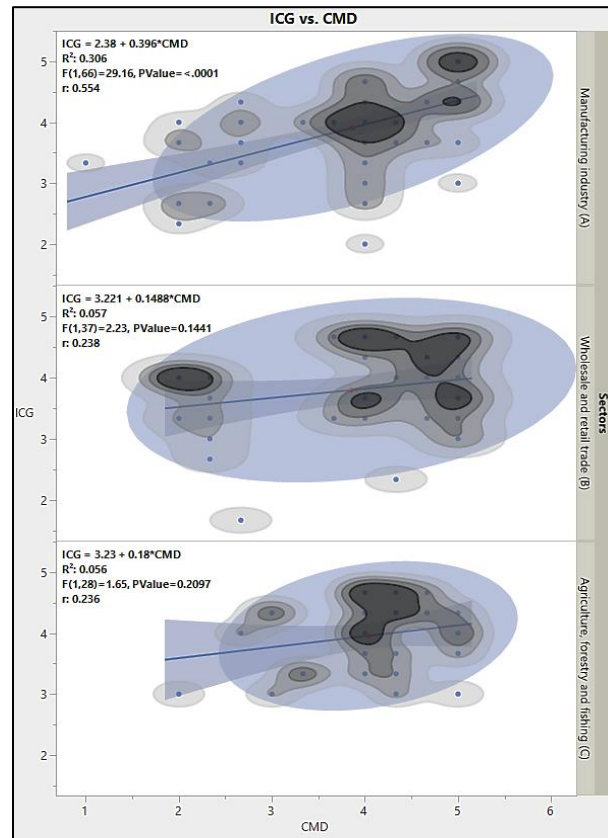


Figure 12. Diagram of the regression equation (ICG) for sectors A, B, and C
Source: Author

We can draw the conclusion that the variables (CMD) and (ICG) have a higher correlation, which is ranked $A > C > B$.

4.4. Multiple correlation and regression analysis for variables (ILRE, CMD and ICG) of all 3 sectors: A, B and C

Figure 13 shows the theoretical system model (3) that serves to investigate all 3 sectors: A, B and C. A dependent variable (ICG) and two independent variables (ILRE and CMD) make up the system model.

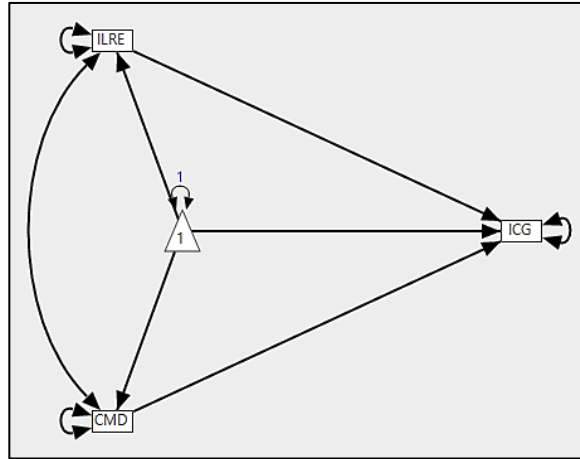


Figure 13. Theoretical system model (3) for all 3 sectors
Source: Author

The theoretical system model (3)'s basic standard evaluation for each of the three sectors is shown in Figure 14. The multiple coefficient of determination is 0.761953, which indicates that the independent variables (ILRE, CMD) can account for 76.20% of the variation in the dependent variable (ICG). There is a significant and favourable association between the factors. 0.872899 is the multiple correlation coefficient. The dependent variable (ICG) is more influenced by the independent variable (ILRE), which has a 0.773 coefficient, than by the independent variable (CMD), which has a 0.408 coefficient.

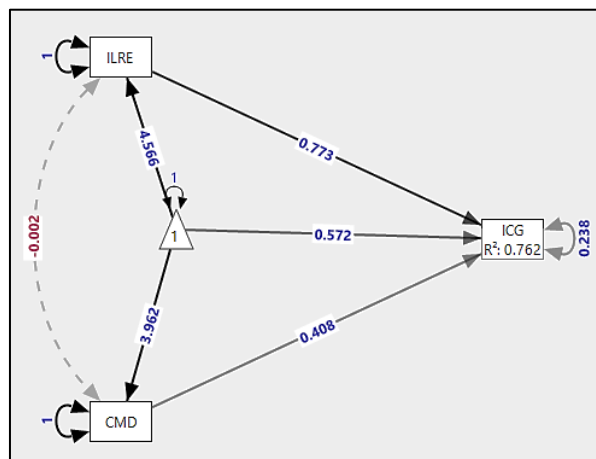


Figure 14. Standard contribution sizes of independent variables (ILRE) and (CMD) of the theoretical system model (3) to the dependent variable (ICG) for all 3 sectors
Source: Author

The assessment of statistical significance is given in Table 8 and it amounts to $[F(2,134)=214.4565, p<0,0001]$.

Table 8. ANOVA for all 3 sectors

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	48.303960	24.1520	214.4565
Error	134	15.091012	0.1126	Prob > F
C. Total	136	63.394972		<0.0001

Source: Author

The alternative hypothesis, which states that ILRE and CMD influence ICG, can be verified for all three sectors based on the data obtained.

Figure 15 displays non-standard contribution sizes for all 3 sectors of the set theoretical system model (3). The independent variable (ILRE) has the higher mean grade value, which is 3.958, and the independent variable (CMD), which has the lower mean grade value, which is 3.90. The variance for the dependent variable (ILRE) is reduced at 0.751, whereas the variance for the independent variable (CMD) is bigger at 0.969. The independent variables (ILRE) and (CMD) have a 0.11 covariance.

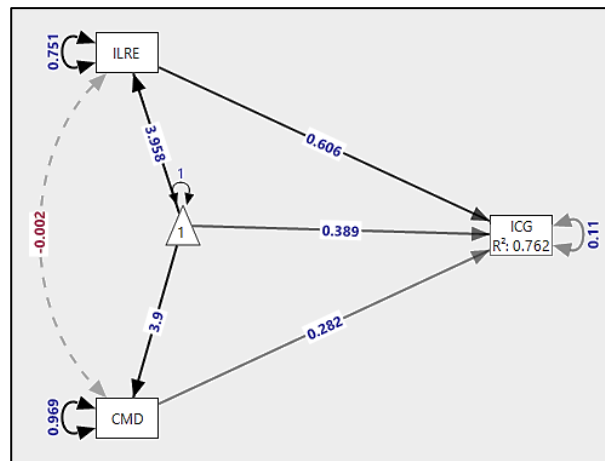


Figure 15. Non-standard contributions of the independent variables (ILRE) and (CMD) to the dependent variable (ICG) for each of the three sectors

Source: Author

A multiple regression equation (formulas 5 and 6) can be created based on the data displayed:

$$y = 0.389 + 0.606 \cdot x_1 + 0.282 \cdot x_2 \tag{5}$$

or

$$ICG = 0.389 + 0.606 \cdot ILRE + 0.282 \cdot CMD \tag{6}$$

Figure 16 depicts the diagram of the multiple regression equation for the variables (ILRE, CMD, and ICG) for all three sectors.

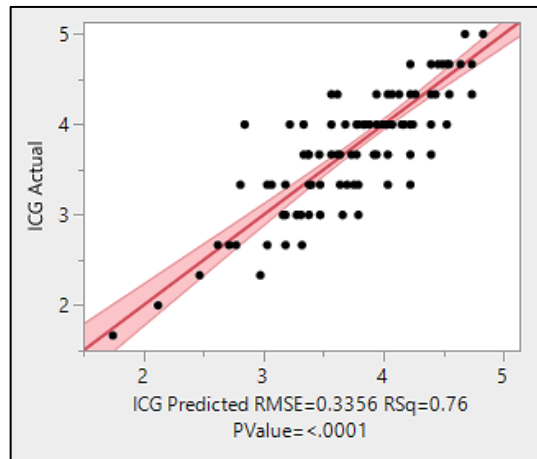


Figure 16. Diagram of the multiple regression equation for the three sectors' variables (ILRE, CMD, and ICG)
Source: Author

4.4.1. Multiple regression and correlation analysis for variables (ILRE, CMD and ICG) for sector A

The theoretical system model (3)'s basic standard evaluation for sector A is shown in Figure 17. The multiple coefficient of determination is 0.820837, which indicates that the independent variables (ILRE, CMD) can account for 82.08% of the variation in the dependent variable (ICG). There is a significant and favourable association between the factors. 0.906000 is the multiple correlation coefficient. The dependent variable (ICG) is more impacted by the independent variable (ILRE), which has a bigger impact, and the independent variable (CMD), which has a lesser impact, which has a value of 0.370.

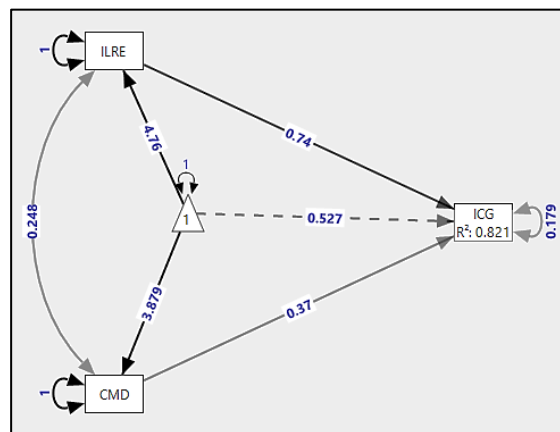


Figure 17. Sizes of the independent variable contributions to the dependent variable (ICG) for sector A's theoretical system model's independent variables (ILRE) and (CMD)
Source: Author

Table 9 provides the statistical significance evaluation, which is $[F(2,65)=148.8995, p0,0001]$.

Table 9. ANOVA for sector A

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	28.385952	14.1930	148.8995
Error	65	6.195747	0.0953	Prob > F
C. Total	67	34.581699		<.0001

Source: Author

The alternate hypothesis for sector A Ha can be confirmed using the data that have been collected: ICG is affected by ILRE and CMD.

Non-standard contribution sizes for the set theoretical system model (3) for sector A are depicted in Figure 18. The independent variable (ILRE) has the greatest mean score, which is 3.93, and the independent variable (CMD), which has the lowest mean score, which is 3.87. The variance for the independent variable (CMD) is the biggest at 0.994, while the variance for the dependent variable (ICG) is the least at 0.091. The independent variables (ILRE) and (CMD) have a 0.204 covariance.

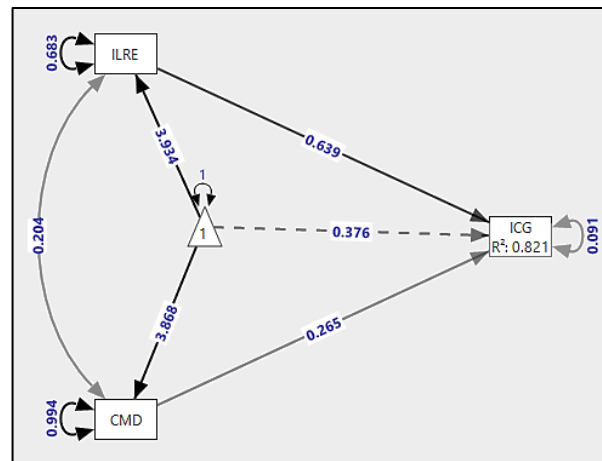


Figure 18. Non-standard contributions of the independent variables (ILRE) and (CMD) to the dependent variable (ICG) for sector A in the theoretical system model (3)
Source: Author

Formulas 7 and 8 can be used to create a multiple regression equation based on the provided data.:

$$y = 0.376 + 0.639 \cdot x_1 + 0.265 \cdot x_2 \tag{7}$$

or

$$ICG = 0.376 + 0.563 \cdot 639 + 0.265 \cdot CMD \tag{8}$$

The multiple regression equation for the variables (ILRE, CMD, and ICG) for sector A is depicted in Figure 19 as a diagram.

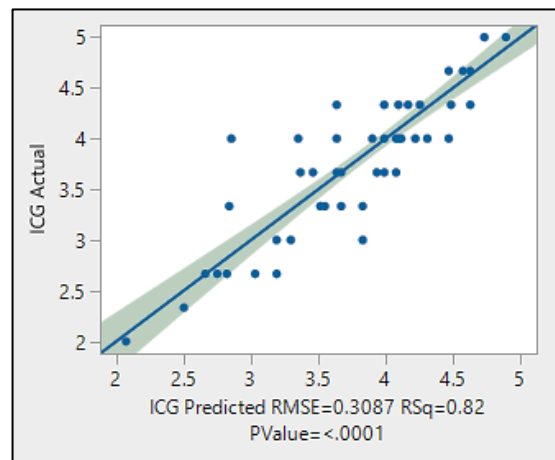


Figure 19. ILRE, CMD, and ICG variables' multiple regression equation diagram for sector A
Source: Author

4.4.2. Multiple regression and correlation analysis for variables (ILRE, CMD and ICG) for sector B

The theoretical system model (3)'s basic standard evaluation for sector B is shown in Figure 20. The multiple coefficient of determination is 0.690993, which indicates that the independent variables (ILRE, CMD) can account for 69.00% of the variation in the dependent variable (ICG). There is a significant and favourable association between the factors. 0.831259 is the multiple correlation coefficient. The dependent variable (ICG) is more influenced by the independent variable (ILRE), which has a value of 0.821, while the independent variable (CMD) has a lower value of 0.438.

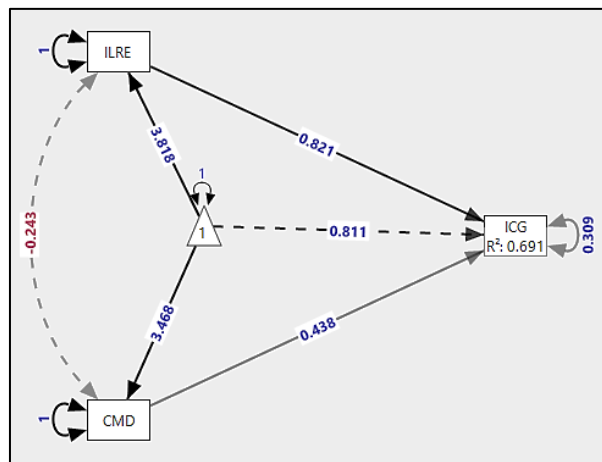


Figure 20. Sizes of the independent variable contributions to the dependent variable (ICG) for sector B's theoretical system model's independent variables (ILRE) and (CMD)

Source: Author

Table 10 provides the statistical significance evaluation, which is $[F(2,36)=40.2512, p0,0001]$.

Table 10. ANOVA for sector B

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	12.993037	6.49652	40.2512
Error	36	5.810382	0.16140	Prob > F
C. Total	38	18.803419		<0.0001

Source: Author

The alternative hypothesis proposed for sector B H_a can be confirmed based on the facts obtained: ICG is affected by ILRE and CMD.

Non-standard contribution sizes for the set theoretical system model (3) for sector B are depicted in Figure 21. The independent variable (ILRE) has the greatest mean score, which is 3.87; the independent variable (CMD), which has the lowest mean score, is 3.85. The variance for the independent variable (CMD) is the biggest at 1.240, whereas the variance for the dependent variable (ICG) is the least at 0.150. The independent variables (ILRE) and (CMD) have a -0.274 covariance.

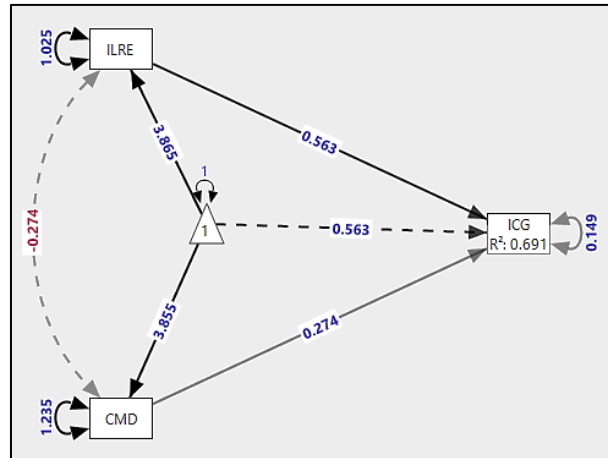


Figure 21. Non-standard contributions of the independent variables (ILRE) and (CMD) to the dependent variable (ICG) for the sector B in the theoretical system model

Source: Author

The supplied data allow for the formation of the multiple regression equation (formulas 9 and 10):

$$y = 0.563 + 0.563 \cdot x_1 + 0.274 \cdot x_2 \quad (9)$$

or

$$ICG = 0.563 + 0.563 \cdot ILRE + 0.274 \cdot CMD \quad (10)$$

The multiple regression equation for the variables (ILRE, CMD, and ICG) for sector B is depicted in Figure 22.

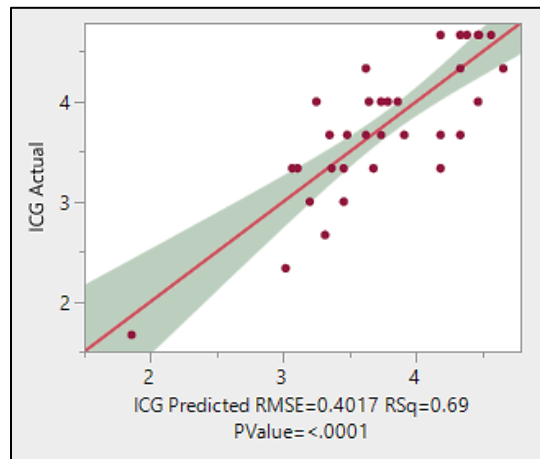


Figure 22. ILRE, CMD, and ICG variables for the sector B's multiple regression equation diagram

Source: Author

4.4.3. Multiple regression and correlation analysis for variables (ILRE, CMD and ICG) for the sector C

The theoretical system model (3)'s basic standard evaluation for sector C is shown in Figure 23. The multiple coefficient of determination is 0.739726, which indicates that the independent variables (ILRE, CMD) can account for 74.0% of the variation in the dependent variable (ICG). There is a significant and favourable association between the factors. It is 0.860073 for the multiple

correlation coefficient. The dependent variable (ICG) is more influenced by the independent variable (ILRE), which has a bigger effect, and the independent variable (CMD), which has a lesser influence, which has a value of 0.475.

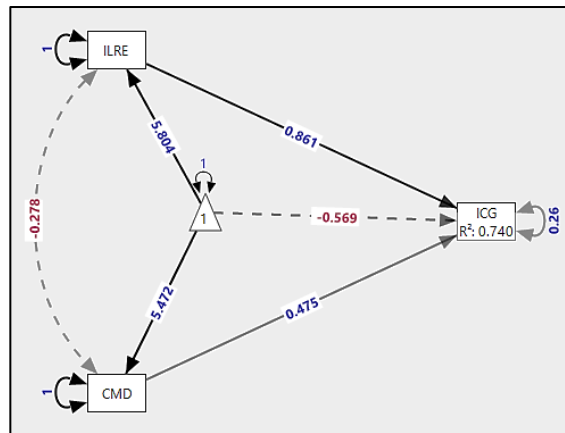


Figure 23. Sizes of the independent variable (ILRE) and the dependent variable (CMD) contributions to the theoretical system model's (3) dependent variable (ICG) for sector C
Source: Author

Table 11 provides the statistical significance evaluation, which is $[F(2,27)=38.3684, p<0,0001]$.

Table 11. ANOVA for sector C

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	7.0246555	3.51233	38.3684
Error	27	2.4716408	0.09154	Prob > F
C. Total	29	9.4962963		<0.0001

Source Author

The alternative hypothesis proposed for sector C H_a can be confirmed based on the facts obtained: ICG is affected by ILRE and CMD.

Figure 24 displays the non-standard contribution sizes for sector C of the validated theoretical system model (3). The independent variable (ILRE) has the greatest mean score (4.13), whereas the independent variable (CMD) has the lowest mean score (4.03). The independent variable (CMD) has a variance that is 0.543 in size, while the dependent variable (ICG) has a variance that is 0.082 in size. The independent variables (ILRE) and (CMD) have a -0.146 covariance.

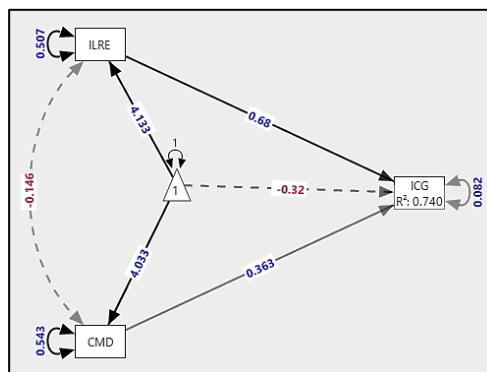


Figure 24. Non-standard contributions of the independent variables (ILRE) and (CMD) to the dependent variable (ICG) for the sector C in the theoretical system model
Source: Author

Formulas 11 and 12 can be used to create a multiple regression equation based on the provided data:

$$y = -0.320 + 0.680 \cdot x_1 + 0.363 \cdot x_2 \quad (11)$$

or

$$\text{ICG} = -0.320 + 0.680 \cdot \text{ILRE} + 0.363 \cdot \text{CMD} \quad (12)$$

The multiple regression equation for the variables (ILRE, CMD, and ICG) for sector C is depicted in Figure 25.

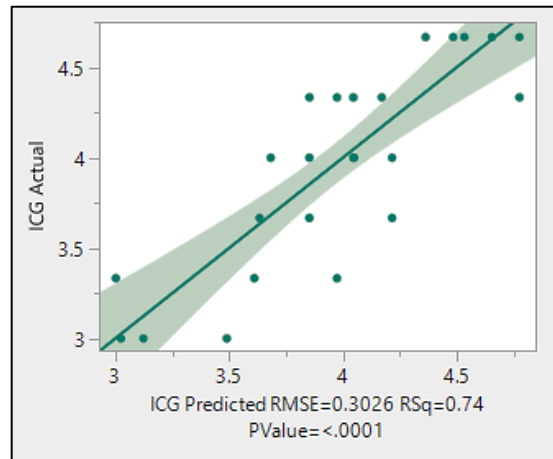


Figure 25. ILRE, CMD, and ICG variables' multiple regression equation diagram for sector C
Source: Author

5. Conclusion

The standard of corporate governance is directly impacted by the kind of regulations and how regulators apply them. Information asymmetry is considerably reduced by the excellent company financial reporting. Institutional (and other) investors must participate significantly in the capital market when there is legal safety and the rule of law. The expertise and quality of the judiciary has a direct impact on the effectiveness of solving potential problems of corporate governance. Based on the aforementioned assertions, it was determined that there is a significant correlation and connection between the variables Improvement of the legal-regulatory environment (ILRE) and Improvement of corporate governance (ICG). Based on the ANOVA for the variables ILRE and ICG, the alternative hypothesis Ha1 was confirmed: ILRE affects ICG.

Supervisory activities of stock and investment analysts additionally motivate managers and reduce agency costs. A developed capital market and good mechanisms for informing of investment public are mutually dependent. A developed capital market facilitates external financing and opens access to new institutional investors. Based on the above statements and according to the correlation and regression analysis of the variables Capital Market Development (CMD) and Improvement of Corporate Governance (ICG), a relatively weak correlation - connection between them was established. Based on the ANOVA for the variables CMD and ICG, the alternative hypothesis Ha1 was confirmed: CMD affects ICG.

Based on the multiple regression analysis for the variables CMD, ILRE and ICG, the alternative hypothesis Ha was confirmed: CMD and ILRE affect ICG, for - Manufacturing industry (A), Wholesale and retail trade (B) and Agriculture, forestry and fishing (C) - considered together and individually, by sector.

Therefore, it was found that the development of the capital market and the improvement of the legal and regulatory environment both have an impact on the advancement of corporate governance, both separately and jointly, for different sectors and for all sectors combined.

The findings of the analysis point to managers of public companies in the Republic of Serbia prioritising the impact of improving the legal and regulatory environment in comparison to the potential contribution of the capital market when evaluating the impact on the improvement of the quality of corporate governance. Such findings are expected given the aforementioned flaws that have dogged the growth of the Belgrade Stock Exchange from the time it resumed operations to the present. Managers, on the other hand, recognise the value of the legal and regulatory framework and are aware of the extent of the current reforms.

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