



# METHODOLOGICAL FOUNDATIONS OF INVESTMENT RESEARCH

**Mukhitdinova Kamola Alisherovna**

*PhD, Associate Professor, Tashkent State Technical University*

## ABSTRACT

In the article there is a systematic and methodological approach to investments methods of empirical assessment of the impact of research factors on investments are revealed. Four major research classes were also analyzed.

Methodological investment most authors were engaged in empirical assessment of the impact of economic and institutional factors on investments. Among these studies, we distinguish four major classes of research: 1) Q -Tobin's research aimed at substantiating the hypothesis that <sup>1</sup>investments are related to the q -coefficient ; 2) studies related to the consideration of the influence of financial and institutional factors on investments in fixed capital; 3) studies related to the assessment of the impact of risks on investments; 4) studies aimed at determining the optimal investment strategy of the company. A detailed overview of these studies is presented in the table.

Researchers attempted to empirically test the hypothesis of Q -Tobin's effect on the volume of investments in fixed capital [ Tobin , 1969] (the first class of research and one of the main directions of modern research on investment activity), and part of this hypothesis was empirically confirmed for foreign companies [ Oulton, 1982 ; Schiantarelli and Devereux, 1989; Schaller, 1990; Bond, 1992; Googler, 2004; Gehringer, 2015; Verona, 2015 ].

For UK companies, Stephen Bond found that the Q -Tobin index is important in investment modeling , but it is also surrounded by the weakness of its influence in the short term of six months to a year. While Oulton draws the same conclusions based on aggregate data, Bond used selective data to reach this conclusion. In Schaller's 30 years of research on US company data , he was able to confirm the Q -Tobin theory, but the author could not observe the existence of the Q -Tobin theory in the aggregated data on industries. The author explains this by the problem of data collection and the lack of pure competition in the market. Fabio Verona, analyzing the American economy for 55 years, comes to similar conclusions. In another study, Schiantarelli groups UK industrial enterprises by size and concludes that Tobin's Q -variable is significant for large enterprises and in general for all enterprises studied in a selective method. In addition, Q -Tobin's theory can be used to study not only the volume of investments, but also the number of mergers or acquisitions of enterprises in the economy, from the point of view of competition, as stated by Geringer. Thus, it was concluded that enterprises do not need to invest to increase the fixed capital, for this it is enough to acquire a competing company.

the studies reviewed above , the authors found that investments depend on the average value of the Q-Tobin coefficient , which requires the use of a number of limiting assumptions (equal to the average level of the marginal product of capital , homogeneity of the production function ) . , which often does not allow determining the dependence of investments on the Q - Tobin coefficient . This problem was solved by another author (Googler), who is the Q of investments - Tobin showed a relationship with co - efficient .

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<sup>1</sup> Tobin JA A General Equilibrium Approach to Monetary Theory // Journal of Money, Credit and Banking, No. 1, 1969.



The Author	Title of the work	Research period	country	Selection level	Data type	Type of assessment	Evaluation object
Q - Confirmation of Tobin's theory							
Outlon N.	Aggregate investment and Tobin's Q	1962-1977	England	1 network in 60 quarters	Macro	OLS	Correlation of Q - Tobin's indicator with the volume of investments and the development of industrial enterprises in England
Shiantarel Lee F.	Investment, Financial Factors, and Cash Row: Evidence from UK Panel Data	1969-1986	England	720 industrial enterprises for 17 years	Micro	Instrumental x- variables method	Q - Tobin's rate of investment volume and impact on different types of UK businesses
Schaller H.	A re-examination of the Q-theory of investment using US firm data	1951-1985	USA	35 years during 188 one in the network q big enterprises	Micro/ macro o	OLS, GLS	Q - Tobin 's theory on investments within a network and a single organization
Bond S.	Investment and Tobin's Q	1975-1986	England	532 enterprises for 11 years	Micro	GMM	Q - The effect of Tobin's theory on the volume of investment of industrial enterprises in England
Googler K.	Marginal q, Tobin's q, Cash Flow, and Investment	1977-1996	USA	560 enterprises for 19 years	Micro	OLS	Marginal Q- the impact of the Tobin indicator on the volume of investments



Manevich E.	Analysis of the Russian economy and Tobin's monetar - dynamic model	2003-2008	Russia	Economy of the country	Macro	OLS	Q- of the Tobin index impact on the volume of investments
Gehring A.	M&A waves, capital investment and Tobin's Q	1995-2015	USA	The country's economy for 40 quarters	Macro	There is	Q- tobin on investments and mergers and acquisitions of enterprises and organizations
Verona F.	The Q theory of investment: new evidence from a time-frequency analysis	1952-2007	USA	The country's economy for 220 quarters	Macro	BWA	Q- of the Tobin index impact on the volume of investments
Assessment of the impact of financial factors on investment							
Chappell H.	Expectations, Tobin's q, and investment	1965-1976	USA	287 enterprises for 11 years	Micro	OLS	Changes in the production volume of industrial enterprises
Fazzari S.	Financing constraints and corporate investment	1970-1984	USA	437 enterprises for 14 years	Micro	GMM	The effect of cash flow on investments
Hayashi F.	The Relationship Between Firm Growth and Q with Multiple Capital Goods: Theory and Evidence from Panel Data on Japanese	1962-1986	Japan	687 enterprises for 24 years	Micro	GMM	The effect of cash flow on investments



Salinger M.	Tax Reform and Corporate Investment: A Microeconometric Simulation Study	1959-1978	USA	30 major industrial enterprises for 19 years	Micro	GMM	Taxes and Cash Flow Effects on Investments
Moyen N.	Investment-cash Flow Sensitivities: Constrained vs Unconstrained Firms	1987-2001	USA	2000 _ organization	Micro	GMM	The relationship between investment and cash flows under different dividend policies
Tybout J.	Credit Rationing and Investment Behavior in a Developing Country	1973-1976	Colombia	Enterprises consisting of 10 employees	Micro	MLE	The impact of debt and cash flow on investment for small and large businesses
Kaplan S. and Zingales L.	Do investment-cash flow sensitivities provided useful measures of financing constraints ?	1970-1984	USA	49 _ organization	Micro	GLS	Correlation of investments with cash flows in the period of financial constraints



Hoshi T.	Corporate structure, liquidity and investment: evidence from Japanese industrial groups	1965-1986	Japan	87 _ organization	Micro	OLS	Impact of bank loans on investments
Heaton J.	Managerial optimism and corporate finance	1994-1996	USA	100 organizations	Micro	GMM	Impact of banking activity on investments
Bond S.	Financial factors and investment in Belgium, France, Germany and the UK: A comparison using company panel data	1978-1989	Belgium, France, Germany, Great Britain	2500 industrial production and processing organizations	Micro	GMM	The effect of cash flow on the profit of the enterprise
Buccellato T.	Ownership Structure, Cash Consistency and Investment Behavior in Russian Firms	2000-2004	Russia	8637 organizations	Micro	GLS	The effect of liquidity restrictions on the volume of investments
Assessment of the impact of risks on investment							



Ghosal V.	Product market competition and the impact of price uncertainty on investment: Some evidence from US Manufacturing	1958-1989	USA	254 organizations	Micro	OLS	Impact of price risks on investments
Ferderer J.	The impact of uncertainty on aggregate investment spending: an empirical analysis	1969-1989	USA	1 network for 30 years	Macro	OLS	Impact of price risks on investments
Leahy J.	The effect of uncertainty on investment: Some stylized factors	1981-1987	USA	772 _ organization	Micro	GLS	Impact of market risks ( price changes on the stock exchange ) on investments
Goel R.	Irreversibility of R&D investment and the adverse effect of uncertainty: Evidence from the OECD countries	1981-1992	Organization for Economic Co-operation and Developm	500 organizations	Micro	GLS	Impact of inflation risks on investments



Sterken E.	Investment, cash flow and uncertainty: evidence for the Netherlands	1985-2000	Netherlands	112 organizations for 15 years	Micro	GMM	Impact of risks associated with changes in demand on investments
Fuss C.	Firms investment decisions in response to demand and price uncertainty	1987-2000	Developed European countries	851 organizations over 13 years	Micro	GLS	The impact of the risks associated with price changes on investments
Determining the optimal investment strategy							
Novy - Marx R.	An Equilibrium Model of Investment Under Uncertainty	2006	USA	150 industrial enterprises	Micro	I'm afraid calculus	Choosing the optimal investment strategy
Leahy J.	Investment in Competitive Equilibrium: The Optimality of Myopic Behavior	1992	USA	200 industrial enterprises	Micro	Simulation model	Effect of optimal investment policy on investment volume
Satining	Option exercise games: An application to the Equilibrium Investment strategies of firms	2001	USA	100 industrial enterprises	Micro	I'm afraid calculus	Effect of optimal investment policy on investment volume



Reynolds S.	Strategic capital investment in the american aluminum industry	1950-1970	USA	All aluminum producing enterprises	Micro	Simulation model	The impact of competition on investment volume
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In short, Q - Tobin's theory was confirmed at the micro level, but with the use of limiting factors , under conditions of pure competition and taking into account the homogeneity of the production function .

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