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Research Paper

The effects of product market competition on labor investment efficiency with emphasis the role of financing constraints[1]

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Introduction

For the past several decades, understanding the determinants of corporate investment decisions has been a major issue for corporate and financial research. Recently, some studies have highlighted the role of product market characteristics in shaping corporate investment policies (Aguerrevere, 2009; Gu, 2016; Stoughton et al., 2017). Following fundamental changes in the competitive environment in various countries, including Iran, many studies have focused on how product market competition affects corporate investment. However, most of this literature relates to corporate investment in capital expenditure, research and development, and innovation (e.g., Akdoğu and MacKay, 2012; Jiang et al., 2015; Frésard and Valta, 2016; Ebrahimi et al., 2016; Nikkar, 2019). Meanwhile, the effect of product market competition on companies' investment in labor has not been considered while it is as important as other variables (Boubaker et al., 2021). Accordingly, in this paper, the effect of product market competition on the efficiency of investment in labor is examined with emphasis on the role of constraints in financing. Therefore, the following hypotheses have been formulated.

Hypothesis 1: There is a significant relationship between product market competition and the efficiency of investment in labor.

Hypothesis 2: The intensity of the relationship between product market competition and the efficiency of investment in labor depends on the level of companies' financial constraints.

Materials and methods

This study is quantitative and post-event research. The sample is based on data related to 122 active companies on Tehran Stock Exchange (TSE) and is based on the financial statements of all companies listed on TSE. In this regard, data from all active companies whose fiscal year ended in Esfand (the final month based on the Iranian

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calendar) and were not classified as financial and investment companies was used. So, the data collection could have covered the 2007 to 2020 period. But because of the limitation of some variables, our data only covers the 2011 to 2020 period. Research analyzes were performed using SPSS 24 and EVIEWS 9.

The independent variable of this research is product market competition, which was measured by the Herfindahl-Hirschman index (HHI). The efficiency of investment in labor is a dependent variable. In this study, align with the studies of Rezaei et al. (2020 a and b), the criterion is taken from the model of Pinnuk and Lillis (2007), Li (2011), and Ben-Nasr and Alshwer (2016). Also, in the present study, according to the purpose of the research, financial constraints have been considered as a moderating variable. The KZ Financial constraint Index is used to distinguish between constraint and non-constraint firms. Finally, in accord with the existing literature, such as Biddle and Hilary, 2006; Jang et al., 2016; Lara et al., 2016; Chen and Wan, 2017; Zhang et al., 2020 and Aflatooni and Khazaei, 2016, we have controlled some factors to test the hypotheses.

Results and discussion

Findings related to the descriptive statistics indicate that in terms of the size of the variables of this study, they are very similar to previous studies (Biddle et al., 2009; Hoberg et al., 2014; Jung et al., 2014; Boubaker et al., 2021). For example, according to descriptive statistics, the mean of the dependent variable (labor investment inefficiency) is 0.141 (0.068), which indicates the actual mean change in the number of employees deviated up to about 14% of its optimal level. This amount has been between 11 to 15 percent in previous studies. The results of regression analysis also showed that there was a positive and significant relationship between product market competition and investment efficiency in labor. The relationship between financial constraints and investment efficiency in labor is also negative and significant. Also, the evidence showed the relationship between product market competitions and over (under) investment in labor is negative and significant. In addition, the intensity of the positive (negative) relationship between product market competition and the efficiency of labor investment (over or under investment in labor) in companies with financial constraints is less.

Conclusion

The results of this paper showed that greater product market competition leads to greater efficiency in labor investment. Further analysis also showed that more product market competition could lead to a reduction in over-investment and a reduction in under-investment in the labor. Therefore, it can be said that product market competition for investment decisions in labor has acted as an effective external governance mechanism and in this regard, directed the managers' decisions to the optimal level. Other findings showed that the intensity of the positive effect of product market competition on the efficiency of investment in labor is less in companies with financial constraints. Also, this evidence was confirmed in the over-investment and under-investment groups in the labor.

The evidence of this research contributes significantly to the existing literature. In particular, the evidence from this study contributes to the current understanding of the determinants of investment labor decisions beyond the company level. These findings have important political implications for government policies to increase employment.

Keywords: Product Market Competition, Over Investment, Under Investment, Labor, Financial Constraint