

An Empirical Study on Relation between Innovation and Employment of Firms

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Abstract

Research Question : The goal of the research is to empirically understand the influence of corporate Innovations on employment based on Korean SMEs' data. ▪ Empirical Study : To estimate the effect of Innovation on Employment, I operationalized R&D investment as a variable representing innovation. I used Korean data of 204 industries (aggregated SMEs) in manufacturing and service industry from year 2004 to 2013. Also, I empirically analyzed the effect of total R&D investment on employment including a time lag. Moreover, I divided R&D investment into two categories: R&D investment for product innovation and for process innovation. To resolve endogeneity issues, I used System-GMM model and applied panel fixed effect model to control individual industries' characteristics and adopted 2SLS fixed effect model using t-1 variable as an instrumental variable. ▪ Empirical Results : According to the result, firms' R&D investment has positive influence on employment. System-GMM analysis shows that when R&D investment increases 100%, employment increases approximately 2.9%~3.5%. When investment types are subdivided, both product investment and process investment showed positive coefficients, yet process R&D investment is far from showing crowding effect. However, product R&D investment had larger effect on employment, of which the size of effect varies from twice (GMM) to quadruple (FE). Another difference is that product innovation sustains for longer time compared to process innovation. Product innovation showed significantly positive impact during the two time periods while process innovation either influenced only on one time t or insignificant effect on the second period

Keywords: R&D investment, employment, Product innovation, Process innovation

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