

## Intellectual Property Rights (IPRs) and Pharmaceutical Manufacturing Organizations' Business Performance

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### Abstract

**The purpose of the study is to investigate the influence of Intellectual Property Rights (IPRs) on Jordanian Pharmaceutical Manufacturing (JPM) Organizations' Business Performance (BP).** Practical data were used in the empirical analysis collected from 126 managers out of 250 managers of the mentioned organizations, by means of a questionnaire. Statistical techniques such as descriptive statistics, t-test, ANOVA test, correlation, multiple regressions, and stepwise regressions were employed. To confirm the suitability of data collection instrument, a Kolmogorov-Smirnov (K-S) test, Cronbach's Alpha and factor analysis were used. **The results of the study indicated a positive significant relationship between IPRs and Pharmaceutical Organizations' business performance.** The use of a single industry study design limits its generalisability to other industries. The research results might help both academics and practitioners to be more ready to understand the components of IPRs and provide insight into developing and increasing them within their organizations. **IPRs are an important source of organizations' wealth and therefore it should be taken into serious consideration when formulating the JPM Organizations' strategy.** This study extends prior research's viewpoint about the linear relationship between IPRs and organizations' BP with empirical evidence.

### ...1. Introduction:

The process of globalization and the emergence of a rules-based multilateral trading system pose significant challenges to local pharmaceutical industries in developing countries (Kilic, 2011). The pharmaceutical industry is currently undergoing significant change, driven by factors such as declining research and development (R&D), vigorous competition from generics industry, the emergence of new markets in middle-income countries, and social pressures (Wellcome Trust, 2011).

The term intellectual property rights (IPRs) refers to those legal rules, norms and regulations that prevent the unauthorized use of intellectual products (Merrill and Elliott, 2004).  
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IPRs essentially consist of two domains: one deal with industrial products, which includes patents, trademarks, industrial designs and geographical indications of source, and the other with artistic products, which are covered by copyright and related rights (The Least Developed Countries Report, 2007).  
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Once IPRs are established, its owner enjoys certain specified rights in terms of its duration, 20 years for patents and life plus 50 years for copyrights (The Least Developed Countries Report, 2007). The patent

system is one of the most successful and important components of the system for managing IPRs that underpins the global knowledge economy (European Patent Organization, 2007).

World Trade Organization (WTO): A global body, established in 1995, that regulates international trade; responsible for the Trade-Related Aspects of IPRs (TRIPS) agreement (Opinion Formers' Conference on Intellectual Property for Better Health, 2011). According to Article 7 of the TRIPS Agreement, "the protection and enforcement of IPRs should contribute to the promotion of technological innovation and to the transfer and dissemination of technology" (United Nations, 2011). IPRs encourage innovation by granting successful inventors temporary monopoly power over their innovations (Falvey and Foster, 2006).

Jordan signed a TRIPS-plus Free Trade Agreement (FTA) with the United States in 2001 (Collins-Chase, 2008). **For Jordan, the pharmaceutical sector is economically the most significant intellectual-property-sensitive sector (Nesheiwat, 2012) and it represents Jordan's second leading sector (Kogan, 2006).** So, it is worth to study the effect of IPRs on Jordanian Pharmaceutical Manufacturing Organizations' Business performance.

## 2. Literatures Review:

With the increasing share of knowledge-intensive products in international trade and the inclusion of TRIPs on the agenda of the multilateral trading system, IPRs have become an important trade issue (Fink and Braga, 2005). International policies toward protecting IPRs have seen profound changes over the past two decades (Fink and Maskus, 2005).

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**Academics, scholars, practitioners and decision makers are divided into two groups: First group claim that there is a positive effect of IPRs implementation on innovation, technology transfer, foreign direct investment (FDI), growth and organizations business performance. While, second group are against the IPRs implementation and justify why they are so.**

... **While, the third group of authors and academics are more faire, because they studied and investigated the effect of IPRs on country by country**, such as: Fink (2005) found: IPRs do not seem to play an important role in influencing total international transactions of U.S. firms. While, IPRs protection has a positive influence on total German exports. Falvey and Foster (2006) concluded: It seems that the implications of stronger IPRs depend on a country's level of development. Demyanchuk (2006) found: IPRs protection has positive influence on GDP growth in low-income countries and countries with low level of IPRs protection. Correa (2007) concluded: It is logical to incorporate sufficient flexibilities for developing countries to design the systems of IPRs in a manner that is consistent with their development needs. Nederland (2009) concluded: FTA is expected to have substantial positive impacts on GDP, income, trade and employment. Lorenczik (2011) concluded: For developing countries, the acquisition of foreign knowledge and technologies from advanced economies and promotion of domestic R&D are essential for a successful transition from low-cost manufacturing economies to innovative industrialized countries.

**Finally, even for Jordan, there is no unified empirical evidence concerning the effect of IPRs on Jordanian economy, while Kogan (2006) s[t]ated: Jordan's generic pharmaceutical companies have benefited from the stronger IP-protection laws by gaining new export markets and by starting to engage in innovative research.** Samawi et. al.

(2012) stated: IPRs protection in Jordan harmed the pharmaceutical industry, one of the most important sectors of the Jordanian economy...

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#### ...5. Study Problem Statement:

The effect of IPRs implementation on countries' economy is varied from country to country, furthermore; its effect varies from industry to industry within the same country. **Few researches have been carried out studies to investigate the effect of IPRs on Jordanian economy, and very few studies have been conducted to explore the impact of IPRs on Jordanian Pharmaceutical industry. Previous studies were contradicting with each other, Kogan (2006) concluded that Jordan's generic pharmaceutical companies have benefited from the stronger IPRs, while Samawi et. al. (2012) stated: stronger IPR protection harmed the Jordanian Pharmaceutical industry.** Finally, Nesheiwat (2012) proclaimed: IPRs have significant and negative impact on Jordanian economy, as well as, Jordanian Pharmaceutical industry. So, this study is designed to investigate the effect of IPRs on JPM organiza[t]ions' business performance.

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#### ...11. Discussions and Conclusion:

**The result indicated that there is a significant implementation of the innovation and creation variable, while there is no significant implementation of the R&D variable and intellectual assets variable among Jordanian Pharmaceutical Organizations.** The overall result indicated that there is no significant implementation of IPRs variables among Jordanian Pharmaceutical Organizations. Generally, it seems that respondents were either aware of the role of the IPRs variables in Pharmaceutical Organizations' business performance, or do they believe that the IPRs variables affect Pharmaceutical Organizations' business performance positively. It also seems that the employees are not in agreement on the implementation of the IPRs variables items. It appears that the respondents strongly believe that innovation and creation variable affect the Pharmaceutical Organization's business performance, while they do not believe that the R&D variable and intellectual assets variable affect positively the organization's business performance. **The reason for this may be related to the low awareness of the role of IPRs in Pharmaceutical Organizations' business performance.**

...Multiple regressions results showed that the innovation and creation variable and the R&D variable were positively and directly affecting the Pharmaceutical Organizations' business performance, while the intellectual assets variable does not affect the Pharmaceutical Organizations' business performance. The overall results indicated that the IPRs variables affect Pharmaceutical Organizations' business performance. Moreover, both multiple and stepwise regressions indicated that the innovation and creation variable was the most significant, and it positively and directly regresses to the Pharmaceutical Organizations' business performance, followed by the R&D variable, while the intellectual assets variable effect was not significant (negative effect).

...**At the same time, the study results are contradicting with the following studies:** Bollen et. al. (2005) IPRs directly and indirectly affects business performance, **Kogan (2006) Jordan's generic Pharmaceutical companies have benefited from stronger IPRs protection.** Park and Lippoldt (2008): IPRs stimulate technology transfer, Briggs (2008): IPRs have significantly positive effect on developing countries, Nederland (2009): IPRs have positive impacts on economical growth, Reinstiller et. al. (2010): IPRs positively affect innovation at the firm level, Carpenter (2011): IPRs play a positive role in

attracting technology, Roy (2011) found a strong relationship between IPRs and profitability, Kabore (2012): IPRs positively impacts local innovation, Lorenz and Veer (2012): IPRs leverage intellectual assets and open innovation, Breitwischer and foster (2012): IPRs encourage innovation.

## ...12. Limitations and Recommendations:

This study is specifically assigned to performance measurement within the IPRs context at the organizational level that should be studied in the light of the following limitations: First, limitations to data access refer to the fact that data gathering through the questionnaires and annual reports is restricted to the period of these questionnaires and annual reports, which may limit the quality and quantity of the data collected. Second, this study presents a snapshot research that does not consider feedback effects. **A longitudinal study to investigate the dynamic features of IPRs would provide further robust results. Third, the field of this study was restricted to pharmaceutical industry; it focuses on one type of industry.** Further empirical work is needed to test the degree to which the study findings can be generalized to other organizations or industries. Further testing might consider a cross-sectional group of participants from a wide variety of industries. Fourth, the results are limited to Jordanian organizations. **Generalizing results of a Jordanian setting to other countries may be questionable.** Therefore, **further empirical researches involving data collection over diverse countries are needed. Finally, measures may need to be refined. Although most variables used in this research have high measurement reliability and validity, some variables may have room for further instrument refinement.**

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