

Factors Influencing Spin-off Activities at Universities: Empirical Evidence from the United Kingdom

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Outline

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- Theoretical background
- Data and research methodology
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Motivation

- Universities contribute to regional development (spin offs).
- Spinoffs medium to expedite technology transfer from universities to firms (Rasmussen & Wright, 2015).
- spin-offs connect industries with academia.
- Many universities use TTOs, incubators and science parks to support technology transfers.



Theoretical background

- Spin-offs (Bellini et al, 1990; Conti et al, 2011; Furrer & Skinner, 2003).
- Support infrastructure promote spin-offs (science parks, laboratories, incubation facilities, TTO, venture capital (Lockett and Wright, 2005, Fini et al. 2009; Salvador, 2011).
- Funding influence university spin-off activities (Van Looy et al, 2011; Rasmussen et al, 2014).
- Institutional support (incentives) promotes spinoff activities (Fini et al, 2009; D'este & Perkmann, 2011).



Objectives

To examine:

the various factors that contribute to universities technology transfer activities.

(What factors influence universities technology transfer activities?).



Data and Research Methodology

- Data was from the Higher Education Business and Community Interaction Survey (HE-BCI) for the 2015/16 academic year.
- The HE-BCI Survey is compulsory for all higher education providers in Wales and England.
- The PLS Structural Equation Model (SEM) to analyze and test the hypothesis.



Hypothesis

- H_1 : *Universities that have supporting infrastructure will generate more spin off firms.*
- H_2 : *The availability of research funding supports universities spin off support infrastructure.*
- H_3 : *Incentives support provided to faculty supports their spin off activities.*
- H_4 : *Effective governance contributes to university knowledge transfer support activities.*



Constructs reliability tests

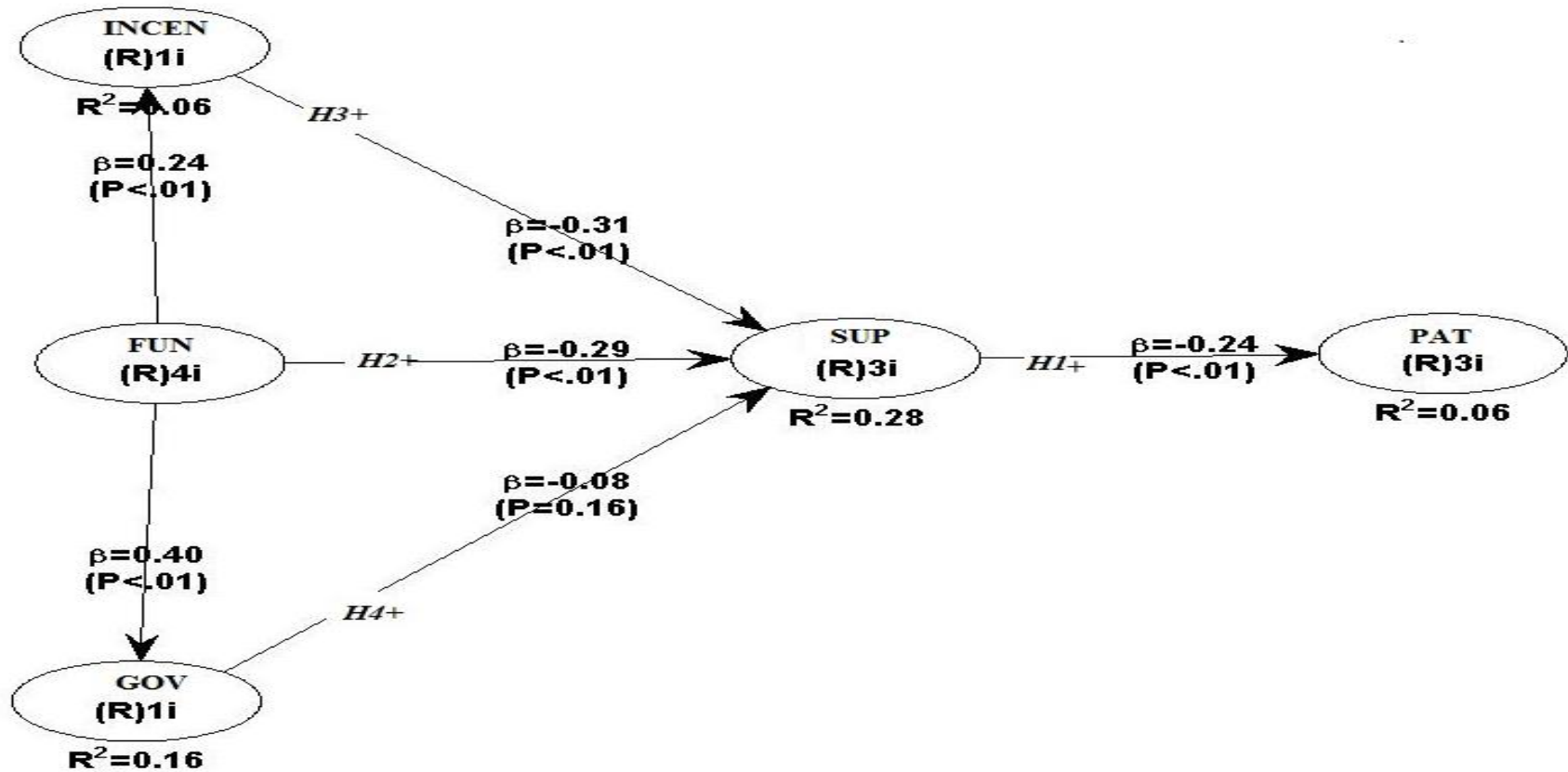
	PAT	FUN	SUP	INCEN	GOV
Composite reliability	0.954	0.839	0.772	1.000	1.000
Cronbach's alpha	0.927	0.742	0.556	1.000	1.000
AVE	0.873	0.569	0.530	1.000	1.000
Full collinearity VIFs	1.852	1.906	1.295	1.266	1.040



Table 3: Path Estimates and Hypotheses Testing

Hypothesis	Regression weights	P values	Remarks
<i>H1 SUP>PAT</i>	0.24	0.001***	Supported
<i>H2 FUN>SUP</i>	0.29	0.001***	Supported
<i>H3 INCEN>SUP</i>	0.31	0.001***	Supported
<i>H4 GOV>SUP</i>	-0.08	0.16	Rejected

Results of hypothesis testing



Conclusions and practical implications

- The study found out that support infrastructure contributes to patent acquisition which was used to measure spin offs activity. It had a coefficient of ($\beta=0.24$). This supports ***H1***.
- ***H2*** is also supported. This study found out that funding support from the public, EU, universities and other sources significantly contributes to the support mechanism and infrastructure ($\beta=0.29$).



Conclusions and practical implications

- The study also supported ***H3***. The study found a significant and a positive effect of incentive support on spinoff activities ($\beta=0.31$).
- The ***H4*** is not supported. The study found that the number of people that manage or govern spin off activities does not necessary influence spin off activities.



Conclusions and practical implications

- Universities can increase their knowledge transfer activities and spin off creation when they are provided with the necessary **support infrastructure, financial support, incentives** to support and entice faculty members that intend to venture into research commercialization as evidenced in the literature will increase their spin off activities



Thank you for your attention

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