

Internet Appendix A139: Organisational Portfolio

Pitcher's Name	Xuefeng Shao	FoR category	Strategy	Date Completed	07/10/2016
(A) Working Title	Diversification or Desynchronicity: an Organisational Portfolio Perspective to Risk Reduction				
(B) Basic Research Question	This project examines whether diversification or its complement desynchronicity is an effective strategy for managers to reduce corporate risk				
(C) Key paper(s)	Donaldson, L., Charlier, S. D., & Qiu, J. X. J. (2012). Organizational Portfolio Analysis: Focusing on Risk inside the Corporation. <i>Long Range Planning</i> , 45(4), 235-257.				
(D) Motivation/Puzzle	Reducing corporate risk has long been a major business strategy concern. While the effectiveness of diversification on risk reduction is supported by multiple empirical studies, division exists over the extent of this effectiveness. Some scholars hold that the relationship between diversification and risk is curvilinear, and some argue that the relationship is neutral. Given the inconsistency of these arguments about the relationship between diversification and risk, this study will examine and develop an alternate perspective to understand corporate risk reduction from the lens of Organisational Portfolio Analysis (OPA).				
THREE	Three core aspects of any empirical research project i.e. the "IDioTs" guide				
(E) Idea?	Reducing corporate risk is one of the main concerns of corporate managers. Corporate risk, which is measured as the fluctuation of corporate income, has a significant impact on the survival and sustainability of firms. In the field of strategic management, diversification has long been argued to be an effective strategy for managers to reduce corporate risk. This study seeks to revisit the much debated diversification-risk relationship with a new lens offered by OPA. This project examines whether diversification and desynchronicity is negatively associated with corporate risk. Donaldson, Charlier, and Qiu (2012) introduced synchronisation compensation (SC) and built on the theoretical foundation provided by OPA, we first introduce 'desynchronicity' as the measure of SC to capture the correlation between the income stream of a BU and that of the remaining company. We then examine two competing hypotheses arising from the traditional diversification literature and the OPA literature, and seek to empirically test how well diversification or desynchronicity explains variance in corporate risk.				
(F) Data?	<p>The dataset targets the entire set of firms in the COMPUSTAT BU database for the years 2002-2011. We need BU financial data of sample firms over a ten-year period to adequately perform desynchronicity. Alongside the constraint of publicly available data, this method also requires the BUs under analysis to be consistent across the entire period. In this database, we include firms with at least two available BUs data for the entire period, and exclude firms missing certain data across the period, leaving a final sample of 737 diversified firms.</p> <p>The sample selection underwent two adjustments. Firstly, our final data set was unbalanced because it included firms with varying degrees of yearly observations. In order to analyse unbalanced data, we chose the current year data as a consistent way to select the sample. Secondly, the splintering or merging of BUs across the ten-year period resulted in incomplete data sets.</p> <p>The modelling used in this study faced challenges such as missing variable issues. Given that risk is influenced by other fixed effects such as board independence, we addressed the issue of missing variables by using time-series, two different periods (5 years each). If the relationship in this sample is still significant, our model works in this case. Therefore, we also use the difference of each variable in our second regression model.</p> <p>Since a few outliers might introduce a substantial bias in the estimation. Therefore, the analysis eliminates the outlier effect by winsorising the continuous variables at the 99th and 1st percentiles of their respective distribution.</p>				
(G) Tools?	Multiple regressions of quantitative data with the aid of SAS software				
TWO	Two key questions				
(H) What's New?	Relevant diversification studies ignore whether the diversification truly has the impact on risk reduction. This study creates a new measure 'desynchronicity' which not only focuses on the level of diversification, but also the income stream movement of an individual BU in relation to that of the corporation. The movement of each BU can be likened to a sinewave: BU income streams can go up and down. If all the income stream movements of BUs are synchronised, this means they move in a similar way and the BUs coefficient correlations with the corporation are 1, thus no risk reduction will occur, no matter how high the level of diversification (i.e., number of different BUs included in the portfolio). This study indicates that diversification may not be the key to reduce the level of corporate risk, lending considerable support to the validity of desynchronicity as a useful concept to explain the relationship between diversification and risk reduction. By examining the relationship between a firm's level of desynchronicity and corporate risk, this study presents the first large-scale analysis and contrasts two hypotheses derived from diversification theory and the OPA perspective.				
(I) So What?	The concept of desynchronicity and its measure developed in this study provide a new avenue for researchers to investigate the relationship between diversification and risk reduction. This study also provides managers a new tool to investigate their corporate portfolio and its risk performance. As implementing diversification strategies are resource intensive and costly, understanding the actual determinants of corporate risk reduction helps managers to make more informed decisions regarding the composition of the corporate portfolio and the risk implications of acquiring or divesting a BU.				

ONE	One bottom line
(J) Contribution?	This study contributes to the existing literature and managerial practices in three key areas. First, we provide the measure of desynchronicity and examine its impact on corporate risk. The literature on the diversification-risk relationship so far remains scattered and inconclusive. The concept of desynchronicity offers a complement perspective to evaluate this relationship and to resolve some of inconsistent findings in the diversification-risk literature. The second contribution of this study is to provide empirical evidence supporting the theoretical validity of the desynchronicity-risk relationship. In terms of the practical contribution, desynchronicity could assist managers to form diversification strategies that are more effective in risk reduction.
(K) Other Considerations	<p>Risks: There are not much literature examines the relationship between corporate risk and diversification and no research has large scale analysis about the risk - desynchronicity relationship. The data of this paper could not apply panel data, and thus only cross-sectional and time-series data are applied.</p> <p>Target Journals: Strategic Management Journal, Strategic Organization, Journal of Economics and Management Strategy, Journal of Business Strategy</p> <p>Limitations: This study has a number of limitations that may offer opportunities for further research. First, the vast majority of firms in the data set do not have comprehensive BU data over a ten-year period (2002-11). Furthermore, the models applied in this study, regardless of cross-section or panel data, are based on historical data. The question of whether the desynchronicity will remain similar in the next period could also be a new avenue for research. In addition, this study mainly focuses on corporate risk and it has the potential to examine the impact of desynchronicity on return. Finally, one side issue be argued in this study was endogeneity, an area of great interest to management scholars (Hamilton & Nickerson, 2003). This study used a lag (of two periods) method to overcome fix-effects. For random-effects, unless finding instrument variables, the problem will be difficult to solve. Nevertheless, endogeneity is not a fatal issue in this study, yet it is worth exploring at a later stage.</p>