

Undergraduate Research Symposium May 18, 2018 Mary Gates Hall

Online Proceedings

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BUSINESS TOPICS RELATED TO EARNINGS, FINANCE, AND MARKETING

Session Moderator: Weili Ge, Accounting

MGH 074

12:30 PM to 2:15 PM

* Note: Titles in order of presentation.

The Effect of a Trade School Education on Lifetime Earnings

Claire Pahlmeyer, Senior, Economics, Accounting, Pacific Lutheran University

Mentor: Lynn Hunnicutt, Economics, Pacific Lutheran University

Mentor: Karen Travis, Economics, Pacific Lutheran University

The rising cost of attending four-year colleges and universities concerns students and parents across the nation, calling for an explanation and possible educational alternatives. One such alternative may be trade schools, which offer a shorter path from secondary education to the workforce. In deciding which post-graduation path to pursue, students (and their parents) may be interested in the rate of return to each of these options. Many estimates have arisen calculating the rate of return to a four-year degree, but comparatively little has been done for trade schools and short-term professional programs. This study is a preliminary attempt to fill this gap. I focus on beauty schools as a specified form of trade school, and compare tuition and early-career salaries from twenty-three beauty schools in the state of Washington to pre-calculated Washington averages for four-year universities. If the labor economy is operating at maximum efficiency, the rate of return for trade schools should be equal to that of four-year universities, i.e. the same benefit to cost ratio. An efficient labor market that includes beauty schools at a higher rate of return than four-year universities could indicate an occurrence of social stigma, encouraging unprepared high school students into a longer program than would be economically efficient. The expected result would be an increase in students capitalizing on the program with the higher rate of return. While preliminary results suggest a higher rate of return for four-year programs, I plan to continue the study with expanded data sets.

Lessons for Finance in the Developing World from Scottish Banking in the 18th and 19th Centuries

Taylor Richard May, Junior, Political Science (Political Economy), Philosophy

Mentor: Jennifer Noveck, Political Science, Western Washington University

In developed economies, medium sized firms make up roughly half of all economic growth and employment. Among poor economies however, these firms are virtually absent, as is financing for the creation of them, despite the rise of innovative microfinance institutions. This phenomenon is termed the “missing middle”. My paper sought to understand how firms of this size were established in the developed world, by juxtaposing the financial ecosystem of Industrial Revolution era Scotland to those of developing countries today. I choose Scotland because of its’ rapid development during the 18th and 19th centuries, despite relative poverty and lack of infrastructure compared to contemporary western European countries. I studied primary sources such as accounting documents, and letters between firm owners and managers to develop a picture of the business strategies and financial products used by these firms. These historical strategies were compared to those employed by modern microfinance institutions such as Grameen, based on their published financial statements. Similarities abounded: schemes where individuals pool their savings to create loanable capital, easy loan terms, co-signing, and other practices. The differences however, are stark. Scottish banks lent small and medium sized debts, and rarely had more than a few hundred, local accounts. Modern microfinance institutions service millions of tiny borrowers. Additionally, Scottish banks were universally general-partnerships, a form mostly extinct today. I conclude by suggesting that these differences were key in allowing Scottish banks to finance the Industrial Revolution in Scotland, and that they could assist in financing the “missing middle” in the developing world today.

The Impact of Government-Linked Companies Transformation Program on the Financial Performances of Malaysian Government-Linked Companies (and non-Government-Linked Companies)

Elaine Synn Yie Khoo, Senior, Mathematics, Economics

Mary Gates Scholar, UW Honors Program

Mentor: Dong-Jae Eun, Economics, Economics

State-Owned Enterprises (SOE) are legal entities either partially or fully owned by the government that undertake commercial activities on behalf of the state. Their legal status, purpose of establishment and missions vary across countries with some becoming tools for countries to better position themselves in the competitive global economy and some to provide public services and ensure distribution of social welfare. In Malaysia, these SOEs are called Government-Linked Companies (GLCs) where the government owns 20% or more of issued or paid-up capital. GLCs not only account for 54% of market capitalization of the Kuala Lumpur Composite Index but also remain as main service providers to the nation in key strategic utilities and services. In 2004, the government of Malaysia introduced the Government-Linked Transformation Program (GLCTP) in response to observing the poor performance of GLCs relative to the broader market on all key financial indicators. It is a 10-year program consisting of 10 Initiatives, most of which aim to elicit better and effective governance through imposition of guidelines and standards supervised and enforced by the Putrajaya Committee on Government-Linked Companies, PCG. With GLCs presence being so abundant and influential, we question the effectiveness of the program which concerns the future of GLCs and non-GLCs in Malaysia. Thus, this paper aims to measure the impact of GLCTP on the financial performance of GLCs (and non-GLCs) by panel data estimation technique. In particular, this project examines the difference in the financial performances of GLCs relative to non-GLCs pre- and post the program after controlling for other confounding variables. Improvements in performances of GLCs compared to that of non-GLCs is expected. If results show statistically significant, the next interesting discussion would then be corporatization over privatization or divestment.

Optimal Dynamic Pricing of Inventories with Stochastic Demand Functions for Online Fashion Retailers

Xiangjun (Aileen) Yang, Senior, Economics, Applied & Computational Mathematical Sciences (Mathematical Economics)

UW Honors Program

Mentor: Michelle Turnovsky, Economics

Mentor: Matthew Lorig, Applied Mathematics

This research deals with the specific dynamic pricing strategy of fashion products sold online. The pricing method works under the condition of a pre-determined quantity of inventory with stochastic demand functions on a limited time horizon,

which is formulated as an optimization problem. To achieve the maximized profit, it is essential to balance between the extra marginal revenue earned by setting a high selling price and the cost lost from unsold items. In order to find the solution, we first develop and estimate a pricing model that captures the important characteristics of the fashion apparel market. Afterwards, we use data from a leading Taiwanese fashion retailer to examine the accuracy of our model. The final purpose of this research is to provide an insightful conclusion of the dynamic pricing policies that would generate the highest retailer revenues.