
There is a large body of literature linking financial development with growth, most of this suggesting a positive linear relationship. I contend that in terms of human development, the relationship is not linear. There is an optimal point of financial development, beyond which increasing financial development becomes detrimental to society. I define financial development as the promotion of varying financial intermediaries, markets and instruments created with the intention of enabling a more efficient movement of savings to investment.

The three papers of my dissertation evaluate, theoretically and empirically, how financial development affects society. The first essay, “Financial Development and Welfare: The Channels of Influence” tests the theory of an optimal level of financial development based on welfare (Human Development Index) as the dependent variable. The second essay, “Stock Markets and Growth: A Re-Evaluation” is unable to find sufficient evidence supporting the claims that opening a stock market increases growth. The third, “Schumpeterian Innovation and Equity Issuance,” presents theory and evidence for the hypothesis that stock markets are more valuable in countries with higher levels of innovative activity.

“Financial Development and Welfare: The Channels of Influence”

As opposed to the traditional evaluation of the relationship between finance and growth, this essay evaluates the impact of financial development on societal welfare. I postulate that there is an inverted U-shaped curve where initially increased financial development leads to higher levels of welfare. Then, the gains of financial development eventually taper off and start falling once the costs begin to outweigh the benefits. Additionally, I argue that the optimal level of financial development depends on individual countries and that more developed economies’ optimal level of financial development is much higher than poorer countries.

This inverted-U-shaped relationship is tested by setting the Human Development Index (HDI) as the dependent variable in panel and cross-sectional regressions. Controlling for outside factors, I find significant evidence supporting my hypothesis using many of the measures of financial development found in the literature and a measure of my own construction. Evidence is found supporting the theory that the optimal level of financial development varies according to relative income.

“Stock Markets and Growth: A Re-Evaluation”

There is a large body of literature stressing the importance of developing financial markets, and specifically stock markets, to enhance countries’ growth. I argue that this relationship is exaggerated and that the simple act of opening a formal stock market is not a good predictor of whether a country will experience economic growth. This can be ascribed to a variety of factors, including the idea that if
there is not enough activity for the market to maintain or if there are factors that contribute to financial crises, opening a stock market will not stimulate growth.

This research uses two Bayesian econometric methods, Extreme Bounds Analysis (EBA) and Bayesian Model Averaging (BMA), to discover if there are meaningful links between stock markets and growth in developing economies. This superior methodology to traditional cross-sectional regressions allows for determining the true impact of certain variables. Using a similar dataset to multiple other studies, I find a zero, or weakly negative, correlation between the opening of a stock market and growth in developing countries. 95 countries and 32 independent variables were used comparing all stock market openings between 1960 and 1999 to those without a stock market on growth between 2002 and 2007.

“Schumpeterian Innovation and Equity Issuance”

I postulate that stock markets are most effective in countries with high levels of innovation. This idea is derived from my hypothesis that highly innovative firms – those with high risk, yet higher potential return – will be more likely to raise funds through stock markets. Using the Schumpeterian innovation life-cycle as a theoretical framework, I argue that that in the beginning, a radical new innovation will have a higher percentage of funds raised through equity issuance until it becomes an acceptable loan for bankers with a limited return (interest rate). Because industries producing goods known to the market have lower levels of risk, they are more likely to be able to secure financing through bank channels. These industries that abound in developing countries are much less likely to have a need for a stock market.

Empirically, I test the relationship of innovative activity to equity issuance by using patents as a proxy for innovation from 1970 to 1993 with 26,784 observations. This independent variable is then regressed on the ratio of funds raised through equity to total funds raised within a six month time period. I find statistically significant evidence using an unbalanced panel as well as probit regressions that those industries with higher patenting activities are significantly more likely to raise funds through stock market issuance than bond issuance.

Future Research

My future research can be broken into three broad areas: (a) the relationship between financial development and welfare, (b) calculation of better metrics of welfare than income measurements, and to a lesser extent, (c) theoretical asset price modeling with fractals. Each of these areas addresses the social impact financial markets play and seeks to determine the ideal financial structure for any given economy.

My dissertation is an examination of the first research group (a), the relationship between financial development and welfare. Within this, I already have the beginning ideas as to three different types of projects I will be able to commence upon completion of my dissertation. The first is to delve further into the issue of how financial structure affects developing countries; I am focusing more on the formal
sector, rather than the informal and microfinance aspects. There is an evolutionary element to the formation of financial markets and I believe more historical perspectives need to be incorporated into the discussion of the necessary financial structure for developing countries.

The second element of the finance-welfare relationship I am working on is empirical work on the linkages between finance and welfare. Where my essay “Finance and Welfare” has estimations comparing financial development to the United Nation’s metric, Human Development Index (HDI), estimating all the linkages was beyond the scope of that paper. In my dissertation piece I laid out a theoretical basis on the mechanisms between finance and welfare and it is my next step to estimate each of those mechanisms. Thirdly, I am seeking to extend my analysis of the impact of financial markets on innovative activity. This will be an extension of the third essay of my dissertation, “Schumpeterian Innovation and Equity Issuance,” in that I plan to further examine the elements of financialization that influence innovative activity; the purpose being to encourage or discourage the institutions.

The second group of research I am pursuing, (b) calculation of better metrics of welfare, is derived from the relative inability of GDP to address societal welfare. The singular focus of many macroeconomists on growth theory is well intentioned, but misses many of the important and intricate features in the determination of welfare. The creation of HDI is a step in the correct direction as it is widely collected and incorporates measures of health and education in addition to income. There are additional metrics, such as GPI and ISEW, which either needs further data collection or more work methodologically on the computations.

The last piece of research, (c) asset pricing models using fractals, is currently a pet project and the farthest from publication of anything I am working on. It is an element of financial markets that not many people appear to be working on, but is an attractive way of looking at asset pricing models without using the bell curve and continuous time.