A Bermuda Equation: Reconciling the Contribution of the Bermuda International (Re)Insurance Centre to Bermuda's Employment Landscape

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Abstract

This article explores the origins of an identified cognitive disconnect between Bermudians and the International (Re)Insurance Centre after the latter's establishment in 1993. Quantitative analysis is used to map the relationship between employment and capital growth. It shows that capital growth is not a sufficient cause of employment growth. The way in which capital is deployed seems to determine the relationship. This article follows the sudden and unexpected change in capital deployment beginning in 1993. This change saw rapid capital growth in Bermuda, paired with employment growth. This period closed in 2009, and now appears exceptional. This paper suggests that considering the employment-capital relationship over time allows for an understanding of the cognitive disconnect as an unfortunate but unintended consequence.

KEY WORDS: *: reinsurance, employment, capital, public policy, international business*

Introduction

Recent commentary on sustainable development in Bermuda has identified, when the island de-centred or shifted from its "tourism heritage" in the early 1990s to accommodate "the unfamiliar world of re/insurance and finance," a "breach between Bermudians and their new economic reality." The breach is understood as a cognitive disconnect but not, it seems, a participatory one: "we were caught" in the new world and did not "understand" it (*Royal Gazette*, August 2014). This kind of disconnect has been noted, if not addressed, in central pieces of public policy (Government of Bermuda 2006) and in at least one major public-private partnership (Bermuda First 2009). The research presented here was first intended to specifically address this disconnect. Instead, it turned into something different, both more and less than its original intention. More, in that it developed into a study of the breach itself: how did it come into being? A quantitative analysis of the relationship between international (re)insurance capital and international business employment in Bermuda is the entry point of the article. Less, since it is more concerned with understanding the origins of the problem, it only goes a small way towards confronting it.

The variables used in this research are publically available data produced by the Bermuda Monetary Authority and the Bermuda Government Department of Statistics relating to (1) employment in the international business sector and (2) international (re)insurance capital. The rationale for using them is twofold. First, they form a reliable dataset. Levels of capital are catalogued from 1981 in the Ministry of Finance's annual National Economic Reports,

[1] *The views expressed in this paper are the author's own and do not necessarily reflect the views of the Association of Bermuda Insurers and Reinsurers or its member organisations.*

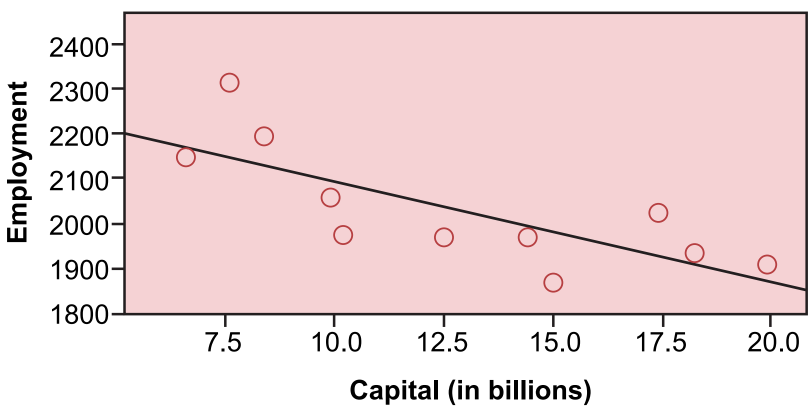
and, similarly, employment levels from 1981 have been recapitulated in reports commissioned by the Ministry of Finance. Second, international (re)insurance capital is a truer measure of local economic impact than say, exempt company formations, since many will have no physical presence in Bermuda, limiting their impact to the provision of services such as legal representation. The drawback is that international insurers and reinsurers are a subset of international business, so employment figures for the latter are not a one-to-one match with the former. However, with this methodological handicap noted, the study makes a compelling case that the two are intimately bound. Through analysis of their relationship, it is hoped that an understanding of the widely identified cognitive breach between the industry and the Bermudian public will be developed.

The employment and international (re)insurance capital relationship (1981-2008)

The relationship between employment levels in Bermuda's international business operations and international (re) insurance capital can be can be broken down into two periods: a) 1981-91 and b) 1992-2008.

Period (a) was characterised by falling levels of international business employment and consistent international (re) insurance capital growth. Annual employment rates were negative in seven of the 10 years, while capital contracted in one year only. Overall, by 1991 employment was at 89 per cent of its 1981 level and capital had grown 201 per cent. In what might appear a strikingly counterintuitive formulation, the covariance between the two variables was negative in period (a): that is, as capital increased, employment tended to decrease (shown in Figure 1). Against the background of market maturity, technological innovation that reduced the level of support staff was cited as the primary suppressor of employment growth at the time (Premier's Task Force on Employment 1992: 8).

Figure 1: **International Business Employment and International (Re)Insurance Capital: 1981-91**

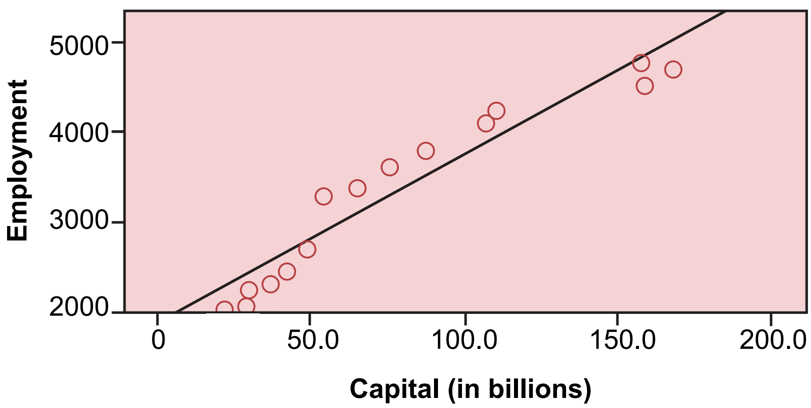


A Pearson Correlation analysis confirms the visual representation of the relationship in Figure 1. Capital and employment levels correlate significantly, $r(9) = -.76$, $p = .006$. This establishes that capital formation on the island and employment levels negatively correlate with some strength in period (a).

No wonder then that in its 1992 report, the Premier's Task Force famously cautioned against future employment growth in the local and international insurance industries. Not only was there little supporting historical evidence on which to build an optimistic case, but the catastrophic events that provided the original conditions for a major reinsurer presence on the island could not have been foreseen. In fact, the Task Force observes positive conditions for the formation of new excess and financial reinsurance companies, giving the industry a "new lease on life." But for reasons that persist in contemporary commentary – the overall maturation of the market and technological innovation – new market entrants are forecast to be "small employers" (p. 8). Otherwise, incoming capital during period (a) was largely used to form captive insurers, the employment impact of which is not nil, but since they are predominantly managed by third parties, they are not often themselves substantial employment vehicles.

As is well known Bermuda experienced a rise in international business employment in the early 1990s. Beginning in 1992 and not ending until 2009, international business employment increased continually at an average of 6 per cent year on year. International (re)insurance capital grew from $21.9 billion in 1992 to $156.8 billion in 2008, declining only once. Employment and capital still tended to move together, but positively instead of negatively. The inversion of the relationship is so complete that the presentation of covariance forms an almost perfect linear visualisation, as displayed in **Figure 2.**

Figure 2: **International Business Employment and International (Re)Insurance Capital, 1992-2008**



A Pearson Correlation analysis shows significance again, $r(15) = .96$, $p =$ nil. In contrast to period (a), however, period (b) displays positive correlation, and the correlation is of notably greater strength.

This analysis has shown that capital and employment related, albeit differently, over periods (a) and (b). Some subjectivity impacts the boundaries of the relationship. One year could be added or subtracted without entirely destabilising the outcomes. So, noting this caution, a change in the relationship is observed beginning in 1992. For one, the value of the variables greatly increases (a change in magnitude), without which it would not be possible to speak of a "shift" in employment generation from tourism to international business by 1994 (Bermuda Employers' Council 2008). The other change, one of kind, does not establish a causal relationship between capital and employment as if the former simply generates the latter. The configuration of the relationship in period (a) should temper that conclusion. This simple fact means that the analysis is incomplete: it is illustrative but not definitive. There are intervening and affecting variables. The 1992 occurrence of Hurricane Andrew, of course, and the following influx to Bermuda of property catastrophe reinsurers in the summer of 1993 coincides with the change in the employment/capital relationship. The 1994 Northridge, California earthquake was the second paradigm-shifting United States catastrophe in two years.

The answer to the question of "Why Bermuda?" has been widely canvassed. Much less well documented locally are the original conditions that are the answer to "how do catastrophe specialty reinsurers form at all?" In local markets, insurers work to diversify risk by accepting different types of risk – travel, home, motor, marine, etc. – from many policyholders. So long as losses affect only a small number of policyholders in a single market, statistical independence is achieved, and diversification by means of local insurance works. Catastrophes, however, disrupt statistical independence by distributing loss to many policyholders in a single event (Cummins 2007). The unprecedented severity of insured loss inflicted by Hurricane Andrew revealed the under-preparedness of many insurers for large natural catastrophes. This resulted in at least seven US corporate insolvencies and many other insurers received capital injections from their parent companies to meet policyholder obligations. One outcome of Hurricane Andrew was the increased use of reinsurance (McChristian 2012), and, in Bermuda, this translated into the creation of the first significant catastrophic reinsurance market (Duffy 2004), prompting an "emancipation from the niche" of captive and specialised liability insurers (Holzheu and Lechner 2007: 893). The underlying logic of reinsurance is that it reinstates the primary principle of diversification, that is, a global reinsurance market spreads risk in a way that primary insurers cannot achieve alone. Put differently, "risks that are locally dependent may be globally independent" (Cummins 2007: 183) through global reinsurance markets. Bermudian catastrophe underwriters, as part of an increasingly global network of suppliers, help ensure the insurability of some of the most catastrophe-exposed regions of the world.

The $4.8 billion in new capital attributed to the 1993 startup of reinsurers in Bermuda after Hurricane Andrew (Cummins 2007) was the then largest annual influx of capital of any kind into Bermuda. The overall increase of 32 per cent that year has only once been surpassed, in 2006, after Hurricanes Katrina and Rita of the previous year. The influx was qualitatively different. From the formation of captives and a limited number of specialty liability insurers, this capital introduced the island to major international (re)insurance operations adequate to underwrite large natural catastrophic risk.

Underwriting is a persistent, physically present constituency of Bermuda's international business sector and not simply a rhetorical device: participating reinsurers in the Association of Bermuda Insurers and Reinsurers' (ABIR) Economic Impact Survey (2014) put underwriters at 24 per cent of their workforce. Extrapolated from the survey sample to all industry players, this count of underwriters would exceed official statistics. The correct reading of the two outcomes is to accept both counts as true, that is, as internally consistent. While some underwriters are classed in other occupations officially, likely in senior roles as managers, executives, and so forth, the industry, left to a method of self-identification, (re)allocates greater numbers to underwriting. This, by itself, is an insight into the Bermuda market. Anecdotal evidence also reinforces the importance of underwriting in the market. According to a Bermuda Human Resources Association survey (2013), underwriters are one of three roles critical to business operations currently and in the next three to five years. The other two roles – actuaries and senior qualified financial experts – are also centrally related to the operations of locally based reinsurance operations.

We can now deepen the effect of Bermuda's canonical experience of 1993. Its impact on the employment/capital relationship appears in the form of magnitude, in the sense of expanding already existing quantities: large deployments of capital were matched with more people to manage and deploy it. But more, it should also be understood as a radical intervention that reversed the course of international business in Bermuda: it is the original means by which period (a) became period (b). Seen from this angle, a cognitive breach is an unfortunate but wholly unintended consequence. Industry practitioners shared the surprise at Bermuda's early success in attracting new reinsurers following Hurricane Andrew (Duffy), together with the Task Force, which was forced to recalibrate its proposals. Later commentary concluded that due to the island's "size constraints" further market expansion would "likely take place overseas" (Higginbottom 2003). Made after the Bermuda reinsurer class of 2001 but before 11 large reinsurers formed on the island following the historic natural losses of 2005, the prediction testifies to how period (b) tended to evade even the most considered and experienced attempts to anticipate its limits.

Lessons for today and conclusion

Today, the intimate links between international business employment growth and international (re)insurance capital growth experienced between 1992 and 2008 have completely fallen apart. If this is experienced as disorientation, it should at least be one without claims to novelty, given the jurisdiction's recent past. Between 1981 and 1991, capital was able to increase, as today, without being associated with increases in international business employment. It should be noted that today, reinsurers have kept employment levels more stable than the total international business sector. An ABIR sample of 16 reinsurers showed an employment level of 1,494 in 2008; the same 16 reinsurers employed 1,404 at year end 2013, a 6 per cent decline. The overall employment level in the international business sector fell 20 per cent over the same period. From 2008 to 2012 international (re)insurance capital increased 23 per cent to $193 billion.

The analysis of the capital/employment relationship offers one firm, if modest conclusion: if capital is a necessary condition for employment, it is not a sufficient condition. Capital infusions into the island for large underwriting operations, exemplified in the reinsurer class of 1993 and the following classes of 2001 and 2005, are now increasingly deployed in qualitatively different ways. Bermuda government statements (*Royal Gazette*, February 2014) and industry commentary (Artemis 2014) agree that innovations among third party capital managers and insurance linked securities do not support the number of jobs their more traditional reinsurer relatives had. In the new business model, the same number of underwriters can manage the risk for multiple capital providers, leading to fewer employees overall than if the capital providers had established separate legal entities.

Period (b) has left a legacy that we have perhaps not fully appreciated and understood. It might be viewed as an interruption, in the form of a new international reinsurance centre, despite government forecasts and established industry thinking, which seemed to support nearly two decades of uninterrupted employment growth. Now, the International (Re)Insurance Centre remains in Bermuda, as does something of the original cognitive breach. There is an opportunity, based on 20 years of experience of an established phenomenon, to honestly address the disconnect.

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