



No citation advantage for monograph-based collaborations?



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ABSTRACT

It is widely believed that collaboration is advantageous in science, for example, with collaboratively written articles tending to attract more citations than solo articles and strong arguments for the value of interdisciplinary collaboration. Nevertheless, it is not known whether the same is true for research that produces books. This article tests whether co-authored scholarly monographs attract more citations than solo monographs using books published before 2011 from 30 categories in the Web of Science. The results show that solo monographs numerically dominate collaborative monographs, but give no evidence of a citation advantage for collaboration on monographs. In contrast, for nearly all these subjects (28 out of 30) there was a citation advantage for collaboratively produced journal articles. As a result, research managers and funders should not incentivise collaborative research in book-based subjects or in research that aims to produce monographs, but should allow the researchers themselves to freely decide whether to collaborate or not.

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1. Introduction

Collaboration has long been encouraged by policy makers, research funders and research managers (Katz & Hicks, 1997) in the belief that it is essential for some types of research, such as Big Science (Price, 1963) or that multi-disciplinary research is essential to solve the problems of the modern world (Gibbons et al., 1994). Perhaps as a result of this, collaboration has increased steadily in academia over the past century, at least in terms of the proportion of scholarly articles that are co-authored (e.g., Moody, 2004; Price, 1963; Wuchty, Jones, & Uzzi, 2007), with co-authorship particularly prevalent in the hard sciences and quantitative research (e.g., Francescheta & Costantini, 2010; Lariviere, Gingras, & Archambault, 2006; Moody, 2004; Wuchty et al., 2007), and with the recent growth of small research teams (Gazni, Sugimoto, & Didegah, 2012). Co-authorship is almost ubiquitous in some areas of science, such as Italian medicine (99%) but much rarer in the social sciences and especially the humanities (Ossenblok, Verleysen, & Engels, 2012; Wuchty et al., 2007), such as 17% in Italian political and social sciences and 8% in Italian law (Francescheta & Costantini, 2010). Indeed, solo monographs seem to be important for academic careers in many areas of the humanities (Cronin, 2012). In other areas of human endeavour, however, such as many arts, co-authored work is rare and individual efforts seem to be essential for high quality outputs. For instance, no book with more than one author has ever been shortlisted for the Man–Booker literary prize, and works of art seem to be almost always essentially the work of a single person in the modern era, with some exceptions, such as much performance art, some postmodern art (Green, 2001; cited in Cronin, 2012), and many modern pop music compositions. Hence it is important to not assume that teamwork is always superior and to identify areas or types of scholarship, if any, for which collaboration should not be encouraged.

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Previous research has investigated collaboration mainly in terms of the citation impact of academic articles, broadly showing that co-authored articles tend to be more highly cited than single authored articles across the sciences and in some social sciences but there seems to be no evidence about this in the arts and humanities. In contrast, some have argued that collaboratively produced research in some areas of the humanities is not valued (Ede & Lunsford, 2001), which can impact on the reputations of scholars producing it. No previous research has focused on the citation impact of collaboration for monographs, however, which are the core outputs of scholarship in the humanities and some social sciences (Nederhof, 2006) and hence should shed the most light on the importance of collaboration and individual work in the humanities. Although there have been claims that book publishing is declining in the humanities (Thompson, 2007), at least one empirical study has contradicted this (Engels, Ossenblok, & Spruyt, 2012).

This article assesses the effect of collaboration on the impact of scholarly monographs, focusing particularly on the humanities and using citation counts as impact indicators to assess whether collaboratively produced monographs tend to have a higher citation impact than solo monographs. The data source is citations to books indexed in the Thomson Reuters Book Citation Index (BKCI), analysed separately for each of the 30 subject areas with the most books.

2. Literature review

Although collaboration in science seems to be a historical product of the professionalisation of research (deB Beaver & Rosen, 1978), at one level, almost all academic products are collaborative to some extent. In addition to indirect collaboration in the sense of building upon, learning from, or being influenced by the work of others, research may have inputs from informal discussions, referees and editors. Such things are sometimes recorded in acknowledgements, and can be thought of as sub-authorship (Cronin, Shaw, & La Barre, 2003). Although cooperation between scholars can occur in many forms, perhaps the most transparent form is that which results in the co-authorship of publications, the focus here. Whilst co-authorship does not always indicate a direct contribution in some fields (Cronin, 2001), in particular with honorary co-authorships apparently common in medicine and particle physics, in most disciplines it seems to be a reasonable way of identifying the people that have made direct and substantial contributions to a publication.

There are many different types of academic collaboration. For example, in addition to two or more authors collaborating on all stages of a process, an author may help the main author by supervising their work, completing a specific task within a project (e.g., literature review, building an instrument, data collection or analysis), or by providing comments or advice on a key aspect (Katz & Martin, 1997; Sonnenwald, 2007).

2.1. The citation impact of collaboration

Co-authorship has been shown to associate with higher citation impact in many cases. For example the average citation impact of all Science Citation Index (SCI) articles increased approximately linearly with the number of authors in 1998, with the impact of international collaboration increasing more than that of domestic collaboration (Persson, Glänzel, & Danell, 2004). Similarly, a moderate positive correlation was found between the number of authors and the number of citations for 11,196 South African SCI (expanded) articles and reviews from 2000, 2003 and 2005 (Sooryamoorthy, 2009), and an association between the number of authors and citation rates was found for most areas of Italian science 2000–2003 (Francescheta & Costantini, 2010). Within science, an increased citation impact for collaborative articles has been shown for biomedical research, chemistry and mathematics (Glänzel, 2002), for Spanish authors in three Biomedical subfields (Bordons, Gomez, Fernandez, Zulueta, & Mendez, 1996), for Chinese molecular biology with international collaboration (Ma & Guan, 2005), (a minor effect) for an ecology journal 1998–2000 (Leimu & Koricheva, 2005), and for biology, biochemistry and chemistry 2000–2009 (Didegah & Thelwall, 2013). In contrast, no relationship was found between citation impact and the number of authors for 2000 published short articles submitted to a single chemistry journal (Bornmann, Schier, Marx, & Daniel, 2012), and Italian physics articles 2000–2003 with large numbers of authors were less cited than Italian physics articles with few authors (Francescheta & Costantini, 2010).

The social sciences are areas of scholarship relating to society and typically using empirical methods. Across the social sciences 2000–2009, articles with more authors tended to have more citations (Didegah & Thelwall, 2013). Within library and information science articles the proportion of the most highly cited articles that were collaborative increased steadily 1976–2004 (Levitt & Thelwall, 2009), Brazilian management science articles 1981–1995 (but only $n = 66$) had a higher impact if they were internationally collaborative (Pereira, Fischer, & Escuder, 2000), collaborative economics articles were more highly cited than solo articles in most countries and most US states but the apparent strength of the advantage depends on the indicator used (Levitt & Thelwall, 2010), co-authorship significantly associated with higher citation counts in management and organisational studies (Acedo, Barroso, Casanueva, & Galán, 2006), and Italian economics and statistics collaborative articles 2000–2003 were more highly cited (Francescheta & Costantini, 2010). In contrast, the collaborative articles of the 30 most highly cited information scientists 1976–2004 were not significantly more highly cited than their solo articles (Levitt & Thelwall, 2009), co-authored articles in 14 finance journals 1987–1991 ($n = 540$) were not significantly more highly cited than solo articles (Avkiran, 1997), and 308 articles from three social personality journals in 1998 were not significantly more highly cited if collaborative (Haslam et al., 2008).

The humanities are areas of scholarship that focus on human culture and which typically use critical argument rather than empirical methods. Within the humanities there are relatively few findings about the impact or value of co-authorship,

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