Observable persuaders: A longitudinal study on the effects of quality signals in the contemporary visual art market

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Producers who have been the subject of signals outperform those who have not. That is the simple conclusion. One reason for this is that signals act as proxies of quality and help reduce buyers and intermediaries’ uncertainty by conveying observable information about producers’ unobservable or latent quality. But not all signals are equally persuasive and hence, may have differential effects on producers’ performance outcomes. Different kinds of signals originating from different kinds of sources with different levels of credibility are often the only proxies of quality available, particularly in markets with imperfectly detectable quality differentials among competitors and imperfect and incomplete information about the products made and sold. Furthermore, these signals may be transmitted in different phases of producers’ competitive activity while different categories of buyers and intermediaries are observing them, either individually or as sets or interactions between signals or sequences of signals. A core question presented in this thesis was: Are there differential effects among producers’ performance outcomes based upon different combinatorics of signals and sources transmitting those signals during different phases of competitive activity? The simple answer is yes. And that is were it gets complicated.

The primary market for contemporary visual art, the focal market of this thesis, is a well-suited empirical setting to study the relationship between the above mentioned combinations of signals and sources and artists’ sales performance, reputational rankings, affiliations with core mediators, and selection to a prestigious program. A unique longitudinal dataset with signal and sales information about the career trajectories of 1,590 visual artists was compiled, and validated using within and between methodological triangulation and then made amenable to econometric analyses. Using non-parametric and semi-parametric models, i.e., switching regressions based on the Heckman two-stage model, Poisson regressions, Cox event history and competing risks analyses, the four studies that make up this thesis empirically demonstrated that signals matter. But temporal dimensions, quantitative signal characteristics and qualitative source attributes determine the extent to which they matter. This is because of the direct way different combinations may affect self-reinforcing feedback-loops that once started, provide some producers a competitive advantage over their rivals. Understanding these competitive dynamics provides additional insight into helping to explain the disproportionally skewed distribution of success in this market, and other markets where the quality of the products are often unknown to all parties in a particular transaction.

Signals received at the start of competitive activity strongly influence producers’ career trajectories and performance outcomes. Again, that is the simple conclusion. But it becomes complicated because, as already mentioned above, not all sources transmit equally persuasive quality signals, and the disparity in magnitude may differentially influence producers’ career trajectories. Especially in the nascent stage of competitive activity, buyers and intermediaries may gain extra confidence in producers’ underlying quality based upon qualitative attributes of the source transmitting the signal, i.e., source credibility levels, diversity in kinds of sources and the financial or non-financial stake sources may have in transmitting signals about producers. This is important because if buyers or intermediaries’ confidence leads to a small or seemingly inconsequential difference in quality perceptions about a focal producer, it may help trigger preferential treatment and grant opportunities to this producer that are not afforded to others. If
this leads to superior performance, than self-reinforcing feedback mechanisms may be created and maintained, further increasing the performance differentials between this producer and other competitors (Merton, 1968; Azoulay et al., 2013).

Theme 1 addressed this issue by focusing on the effects of multi-dimensional qualitative attributes of sources conveying signals, and Theme 4 concentrated on different phases of producers’ career trajectories. Both of these themes are common threads that run across all four studies. Specifically, Chapter 2 focused on the extent to which scores applicants received from jury members on selection criteria during the last round of a multi-round selection process predicted short and long-term performance outcomes of those accepted and rejected. Those applicants who transmitted credible signals had a greater likelihood of acceptance to the program. This chapter focused on how the jury reacted to the available signals and judged the credibility of the applicants; by studying the career performances of both accepted and rejected candidates, a greater understanding of the extent to which these same signals predict differentials in overall career outcomes was gained.

These recurrent themes: qualitative source attributes and career phases were also highlighted in Chapters 4 and 5. These two chapters focused specifically on the nascent phase of competitive activity and empirically demonstrated that the order of the first sequence of signals from highly credible third party sources with different stakes in the future performance of the subject of the signals (Chapter 5) and the diversity of sources transmitting signals about the focal producer (Chapter 4) positively and significantly affected producers’ long-term performance outcomes. Collectively, Chapters 2, 4 and 5 provided empirical evidence showing that at the start of producers’ careers, qualitative attributes of sources transmitting signals, i.e., level of credibility, diversity in kinds of sources and their stakes, created performance differentials among producers that generally continued over the entire productive lifetime.

Complementing these aforementioned studies, Chapter 3, concentrated on all phases of producers’ competitive activity. This chapter empirically demonstrated that the number of signals, including past sales, in a given year positively increased the likelihood of producers’ products to be purchased in the following year, but per kind of signal the increase in the quantity of sales and sales price were different. This difference was directly related to qualitative source attributes; namely, the source credibility level, which was found to systematically influence self-reinforcing mechanisms governing competitive dynamics across all career phases.

In short, the more a market is characterized by uncertainty about the quality of products and producers, the more powerful some sources transmitting quality signals will be. Paradoxically, however, too many signals from too many sources may result in information overload, which adds to uncertainty, further complicating decision-making processes. Under conditions of bounded rationality, intermediaries and buyers – even those with high-levels of specialized knowledge and access to detailed information from their professional networks - may rely on simple rules or heuristics to help them overcome information overload caused by heterogeneous signals transmitted by heterogeneous sources about producers. Bounded rationality (Simon, 1972) suggests that buyers and intermediaries are bound by their cognitive limits because they cannot access and assimilate all quality information about all producers in a focal market, and instead of seeking to maximize their benefit by searching comprehensively for information they rely on simple rules to guide them in their decision making.

One way to reduce uncertainty in conditions of bounded rationality is through commensuration, which enables the transformation of heterogeneous information about producers’ quality into a common metric (Espeland and Stevens, 1998). Theme 2 addressed this issue by focusing on how the number of signals of the same kind or highly diverse sets of signals from different kinds of sources function as an aggregate indicator of quality by combining quantitative and qualitative information about a focal producer’s quality and transforming it to a common standard useful in making comparisons among competitors. Under conditions of bounded rationality, the extent to which signals of the same kind or sets of signals of different kinds affect different kinds of buyers and different kinds of intermediaries, presented in Theme 3, is important because it provides insights into understanding success in markets with incomplete and imperfect information about the producer’s underlying yet hard to directly observe quality. Again, these two themes weave through the four studies in this thesis, as discussed below.

Largely due to high costs of searching and assimilating all available quality information about all producers in a focal market, buyers and intermediaries may consciously or unconsciously rely on heuristics to simplify their decision-making. Chapter 2 empirically demonstrated that juries rely on aggregate information provided by applicants when making their admission decisions. Chapter 3 showed the degree to which self-reinforcing processes governing competitive dynamics in a market are also determined by past sales; the data provided empirical evidence showing that expert buyers often based their decisions on the purchase decisions of others in their professional network. In general, aggregating heterogeneous quality information into a whole was a heuristic used by decision-makers in both chapters; and specifically in Chapter 3, buyers engaged in observational learning (Bandura, 1977; Bikchandani, Hirshleifer, Welch, 1998) and relied on other buyers’ purchases as signals of quality, which affected their purchase decisions (Salganik, Dodds and Watts, 2006; Salganik and Watts, 2009).

Chapter 4 and Chapter 5 concentrated on sets of signals functioning as wholes by emphasizing diversity of sources and the variance of the credibility of those sources as well as the temporal order of signals in a sequence of signals, respectively. Chapter 4 focused on core mediators, a specific kind of intermediary, whose explicit decision to signal about new producers allows them to cross the so-called legitimacy threshold (Zimmerman and Zeitz, 2002; Rutherford and Buller, 2007; Rutherford, Buller, and Stebbens, 2009) and compete in a market as fully-fledged and legitimate competitors. The results from the empirical analysis showed that greater diversity in kinds of sources provided core mediators additional confidence in their perception of the underlying quality of the nascent competitors. Put differently, greater source diversity helps core mediators discount possible biases about producers from third party sources of the same kind, and at the same time gain additional confidence in the underlying quality of the focal producers. Chapter 5 showed that the temporal order of the first sequence of signals in a producer’s career transmitted by highly credible third party sources with different stakes in the future performance of that producer had differential effects on performance outcomes. Specifically, the long-term effect was significantly stronger when the first signal...
in the sequence originated from a third party source with a financial stake followed by a signal from a third party source without a financial stake, compared to the reverse. This demonstrated that the order in which signals occur in a sequence is often used as a heuristic during pre-purchase decision-making, and that the addition of the effects of sources with different stakes is not commutative. If sequence matters here, in the rather extreme case of a first sequence of quality signals affecting overall career performance, it is to be expected that sequences will also matter in different career phases.

In conclusion: signals matter because they help overcome uncertainty about producers’ quality in markets with information gaps, and the sources transmitting those signals determine the extent to which they matter. That is simple. But it becomes complicated when discerning which ones, because different quantities or sets of signals transmitted by different kinds of sources with different qualitative attributes conveyed at different phases of competitive activity have differential effects on producers’ short and long-term performance outcomes. And too many different kinds of signals transmitted by different kinds of sources may result in further complications caused by information overload. In these situations, consciously or unconsciously buyers and intermediaries will be likely to opt for simpler rules, precisely because the demands of the more sophisticated ones seem too high. Following the basic approach of bounded rationality, relying on a simple rule for which one has adequate information can be more attractive than relying on a better but much more complicated rule for which one might not have all the right information within a reasonable time. Transforming quantitative characteristics of signals and qualitative attributes of sources transmitting those signals into a common metric is advantageous because it reduces costs and enables quick comparison among competing producers, but aggregating quantitative and qualitative information into a whole is a complex process. And that is where it becomes difficult again. And because of that difficulty, buyers and intermediaries will be attracted to using shortcuts to interpret impressions of complex wholes and triggers that provide additional confidence of their initial intuition regarding focal producers. In turn, this means that particular combinations of signals, particular sequences, particular levels of diversity along particular dimensions can act as such triggers and thereby the signals that comprise these combinations or sequences, or lead to these levels of diversity, will be more powerful than the sum of their individual effects. So to understand how and why the simple rule works, one needs to give attention to the complicated arrangements that can power the simple rule.

But at the same time it is simple. In the nascent phase of competition, producers who are the subject of signals will outperform rivals with - and without - signals as long as the signals they are the subjects of are transmitted by highly credible or diverse kinds of sources and received in the right order. In later phases of competition, past signals – the strength of which is moderated by source credibility - and past sales provide producers a competitive advantage that systematically translated into superior and persistent performance. Although producers simply need to become the subject of the right signals from the right sources at the right time, the simplicity of this recipe for success greatly increases competitive pressure, especially in a market context characterized by oversupply. One rarely gets a second chance to make a good impression. Each period brings a new cohort of competitors to the market who compete to become the subject of the most credible signals and the most effective combinations of signals. High-prestige art academies as well as core mediators feel pressure to select the right artists at the right time, while their decisions can affect the chances that the artist will receive attention from buyers and other decision makers. And they, the core mediators possibly more in respect to commercial success and the art academies possibly more in respect to reputational success, will try to predict the artist’s future career performance, and will have a vested interest in their predictions coming true, just as the other third party sources, especially the highly credible ones. Referring back to the cartoon presented in the introduction of this thesis, where a middle-aged couple is looking at a contemporary artwork; a response from the husband to his wife’s perplexity concerning the contemporary artwork could have been: “It really is simply complicated, darling. But of course that is old news now”. 