Defining the Impact of Participation in Artist Residencies on the Career Success of Dutch Contemporary Artists.

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Master Thesis

June 2020

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Abstract

An artist residency is a great opportunity for an artist to devote a few months up to a year to build their professional network and pursue artistic practice without worrying about anything else since the artists are financially supported by participating in such programs. That is why artist residencies are considered to be an important catalyst for artists' careers. The Netherlands is known for a prosperous and innovative contemporary scene and the concept of artist residencies is rather popular among Dutch artists, therefore, this research aims to find the impact of artists' residencies on the success of Dutch artists' careers afterwards. The "success" in this research is described by the following factors: artistic success, commercial success and an artist's ranking in the ArtFacts database. The original data used for this study was collected through Dutch contemporary artists' curricula vitae. Further, the data was analysed with such statistical methods as the OLS and 2SLS estimator. The main findings of the research indicate that artist-in-residence programs have a positive impact on the artistic success of Dutch contemporary artists. With regards to ArtFacts ranking, artist residencies have a positive and significant relationship with the ranking, however, the relationship could not be described as causal. No significant relationship was found between participation in artist residencies and commercial success.

Keywords: Contemporary Artists, Artist Residencies, The Netherlands, Artistic Success, Commercial Success, Regression analysis

Acknowledgements

First and foremost, I would like to express my gratitude to the supervisor of this thesis - Prof. Isidoro Mazza. I would like to thank Prof. Mazza for the continuous support, knowledge and patience that was contributed to the realization of this thesis. Besides the supervisor of this thesis, I would like to thank the whole faculty of the Erasmus School of History, Culture and Communication, who provided me with the knowledge and tools to complete this research.

1. Introduction

An artist residency or an artist-in-residence program is a concept which entails an artist living in a different environment (even a country) for a specific amount of time, where one can fully devote all energy and thoughts to the creative process by researching, reflecting and creating new means of artistic production. Firstly, artist residencies often ensure that the artist has adequate economic and professional resources to devote time and energy to artistic practice. Secondly, the host organization gives artists guidance, feedback and opportunities to establish their professional network and build an audience. Lastly, being in an artist residency also increases the capacity of cultural awareness as well as the capabilities of organizational and managerial skills, which can help the artist to turn their artistic practice into a business opportunity and bring economic benefits (European Commission, 2014). Also, Styhre and Eriksson (2008) state that participation in artist residencies is an inspiring process, which accelerates intrinsic benefits such as passion and creativity. Consequently, these intrinsic motivations can translate into practical work. The residencies are always organized by a host organization, which provides the artist with facilities and guidance. The host organizations often specialize in one specific creative discipline, such as visual arts or writing. Although, there are multiple disciplines of which one can attend an artist residency, the highest share of artist residencies focus on visual arts.

The Netherlands is home to one of the most progressive and innovative contemporary art scenes in Europe. The quality of higher education in the arts, the generous public support for the arts and the closely interconnected gallery system in the Netherlands has fostered the growth of Dutch contemporary scene which has resulted in many young and prosperous contemporary artists who conquer not only the local but also the international art market. Also, the Netherlands is home to more than 50 artist-in-residence programs, approximately 7% of the world total, which stands at 768 residencies (Transartists, n.d.). Since a lot of public funding is put into supporting both the host organisations and artists, who wish to participate in residency programs, it is necessary to evaluate the impact that these initiatives have on artists' career success. The notion of 'success' has always been quite ambiguous and uncertain because, unlike in other industries, artists can be mainly driven by intrinsic motivation to pursue their career in the arts. Moreover, the art market is rather uncertain in terms of information about quality and value, therefore, there are many determinants which may drive success.

Therefore, the central research question of this study is the following : *How does the participation in artist residencies impact the career success of Dutch of contemporary artists*? The importance and value of artist residency programs has been acknowledged among art market participants, however, the impact of these programs on Dutch contemporary artists' (or any artists') career success has not been empirically investigated in the academia, thus, this study will contribute to literature about artists' career success determinants and artist-in-residence programs. Furthermore, by answering the proposed research question, this study will bring valuable insights and avenues for further research regarding this topic and provide recommendations for visual artists, host organizations and public institutions that will reflect on how to maximize the value of the residency programs on artists' careers and the visual arts industry as a whole.

The rest of the paper is structured in the following manner. The second chapter is dedicated to theory, which compiles the theoretical background regarding artist-in-residence programs, particularities of artists' careers and various factors which determine contemporary artists' career success. At the end of the chapter, the main hypotheses of this study are introduced. The third chapter of the paper describes what methodological tools will be used to answer the research question. The fourth chapter is dedicated to the analysis of results from the original data set constructed for this research. The last section discusses the obtained results, acknowledges the limitations of this study and presents further research implications.

2. Theory

2.1. Literature Review

The impact of artist-in-residence programs on artists' careers has not been studied in the academia, however, separate concepts which are highly related to this study have been studied among cultural economists and organizations, such as the European Commission. Firstly, the concept and benefits of artist residencies will be discussed. Then, the particularities of artists' labour market will be drawn upon. Lastly, since the success of an artist entails many aspects, such as gallery representation, exhibitions, participation in international arts events and recognition in the media, therefore, a detailed description of these aspects will be delivered.

2.1.1. Artist-in-Residence Programs

European Commission (2014, p. 9.) describes artist-in-residence programs as initiatives, which provide artists and other creative professionals with time, space and

equipment to fully devote oneself to the artistic practice, however, according to Transartists (n.d.), the leading database for artist-in-residence programs around the world, artist residency is a programme, in which artists and other creative professionals are given a chance to temporarily live, work and create in a creative environment, in which the artists are supplied with appropriate working facilities and give an opportunity to gain valuable connections and a new audience. As Transartists (n.d.) informs, currently, there are 768 artist-in-residence programs for visual artists globally. However, there are only a few countries in the world which could match the Netherlands regarding the amount of funding for the visual arts sector. According to Transartists (n.d.), currently, in total there are 51 artist residencies in the Netherlands of which 21 specialize in visual arts. The most prominent, prestigious and internationally acclaimed artist residencies in the Netherlands are Rijksakadamie and De Ateliers in Amsterdam, as well as Van Eyck Academie in Maastricht.

Moreover, usually, the artists that are participating in these programs receive a grant or a scholarship, so that the full capacity of the artist's abilities can be devoted to the artistic practice. There are usually two major elements in a residency: (1) that the artist is financially supported to work in a particular context and (2) that the artist connects with other artists and share ideas in the context, which is common to them (Stephen, 2001). Each program is different, however, in most cases, the programs vary in terms of length (from a few weeks up to a year) or they can vary in terms of the artistic discipline, such as painting, sculpture or pottery and the financial support for attending the program can vary as well. Although many artist-in-residence programs impose rules that the participants have to comply with, such as preparing an exhibition at the end of the program, usually the programs give the artists free space and time to explore new avenues of creativity.

As of 2020, the academia has not had a particular interest in artist-in-residence programs, however, some scholars have touched upon the subject of matter. Hunter-Doniger & Berlinsky (2017) argue that the "Studio Learning Framework" is typical in the arts and can be best applied in initiatives, like the artist-in-residence programs to promote creative skills. The practical earning process is opposite to the traditional passive way of learning, as it allows to discover new knowledge and meaning through the creation of art. The authors declare that such programmes are particularly valuable in the advancement of artists' involvement in the community, engagement with art and personal growth. Further, Leonard (2014) researched artist residency programs in the context of dance. Through qualitative methods, such as interviews and performance observations, the author found that educational programs, which are in the form of a residency, illuminated such 'demographic signatures' as participation,

multiplicity and movement among the students. These articles found that residencies are a valuable form of learning and nurturing artistic expression, which can significantly help artists to prosper in their professional careers.

2.1.2. Artists' Careers

The artists' labour market has always been fundamentally different from the labour market in other professions. People start artistic careers not because they are obliged to choose such a career path but because this is their passion and something that they deeply want to pursue against the odds. Artists possess a high level of intrinsic motivation, which inclines that artists are selflessly devoted to the arts (Abbing, 2002). However, Frey (2019) argues that people become artists also because of social aspects. The possibility of gaining social recognition by being an artist is always on the table as artists tend to strive for the 'celebrity' status, which would eventually entail a high level of compensation. Porter (1997) declares that low entry barriers are directly impacting the amount of players in an industry. If there are low capital requirements, more players will enter. This is also the case of the art market. There are little to no entry barriers in the art market, as artists primarily work individually and do not have to have a formed business or institution or have considerable financial resources to start their career in the arts. Moreover, artists do not face legal or institutional barriers for entering the art market, because the profession does not necessarily require certification or admission exams. Finally, the concepts of value and quality are quite vague and ambiguous in the art world, which allows for many artists to enter the market and strive for recognition of value and quality by other market participants, such as galleries, curators, collectors and other experts.

All of these aspects have facilitated the oversupply of artists in the market. Consequently, the excess of supply has fostered huge income inequality among artists. While some artists gain celebrity status and earn an abnormal income, many artists are subjectable to the figure of *starving artists* (Frey, 2019). Dutch cultural economist and artist Hans Abbing (2002) proposes 6 explanations regarding this matter: (1) the art market is a winner-takes-all market, which means that few competitors take the largest proportion of rewards; (2) artists believe that they are unfit for professions in different industries; (3) The artists' valuation of rewards does not unitarily incline monetary rewards but also artistic excellence and social aspects; (4) comparing to other professions, artists tend to be more risk-averse, meaning that artists tend to avoid risky business decisions and opt for safe decisions which deliver a stable return; (5) following risk aversion, Abbing (2002) argues that artists tend to overestimate their skills, which leads to self-deceit and ignoring available information about risks and rewards in

the market; (6) the art market has a high level of information asymmetry and is not transparent, this also facilitates the fifth point.

Several studies have been devoted to employment trends in the artists' labour market. Overall, the incomes earned in the arts are relatively low. Firstly, empirical research shows that the artists' labour market presents a higher rate of unemployment and that artists work fewer hours than professionals in other industries, therefore they earn a lower wage (Alper & Wassall, 2006). The same research finds that most people who choose a career in the arts do not remain in the profession for a significant period of time and the ones who stay in the artist occupation, tend to have an additional job, most commonly in various services because it offers a lot of flexibility to pursue their true artistic goals. Mangset et. Al. (2017) find that particularly in Norway, artists' incomes have decreased in the time from 2006 to 2013 because artists are devoting significantly less time to artistic work and compensating these working hours with non-artistic work. Further, Rengers (2002) delves into the careers of, particularly Dutch artists. The true panel-data study with 540 Dutch artists included 2 surveys in 6 year time period after the graduation. The study revealed several important particularities of the artists' labour market in the Netherlands. Firstly, he found that professional arts education does not have a significant impact of an artist's careers as the data showed that non-educated artists earn similar income and exhibit the same supply behaviour as formally educated artists. Secondly, Rengers (2002) discovered that 6 years after graduation, approximately 65% of artists work full-time as artists. Thirdly, the author accentuated that there is a significant wage-gap in Dutch artists' labour market as female artists earn about 30% less than male artists. Lastly, Rengers (2002) distinguished two common career paths for artists: the government market and the private market. The author provided evidence that having a career in both markets accommodates a faster career success. According to the data, approximately 60% of Dutch artists participate in both markets, however, only 15% of artists earn income only from the public sector even though reaching career success in the government market is faster and easier in the private market.

Additionally, scholars have researched which is the age in which the artists most commonly reach their career peak. One of which is Galenson (2000), who researched the relationship between the values of paintings in auctions and the artists' age when the painting was made. After analysing the careers of 42 modern artists born in two-time cohorts (American artists born between 1900 and 1940 and French painters born between 1820 and 1900).The author concluded that the peak of the artists' careers is highly dependent on their artistic style. The artists, whose art is conceptual, peaked earlier in the career. This can be attributable to the

fact that conceptual artists use a systematic plan for making their art. One of such artists is Picasso. However, experimental artists, who use an incremental technique and seek perfection in their artworks, bloom and reach the peak later in their careers.

2.1.3. Artists' career Success Factors

As previously already discussed, artists' labour market and career paths are rather different from professionals in different industries. Also, the measures of success for an artist's career are different because artists are driven by not only extrinsic but also intrinsic motivations, which often dominate. Therefore, this section of the literature review will define various aspects from which an artist's career can be determined as successful.

Intermediaries and Gatekeepers

The art market itself has always entailed a higher level of uncertainty than other markets, as the products sold on the market require a significant amount of explanation, evaluation and the value of the product is often hard to determine. Since contemporary art is often conceptual and can be harder to comprehend for people with less knowledge about art or particular artists, the role of cultural intermediaries and mediators, like galleries, museums, curators and critics is a fundamental component of the contemporary art market. In the late 1980s, Bowness (1989) distinguished 4 circles of recognition when analysing how modern and contemporary artists become well-known. Firstly, the author declared that the artist gains recognition among peers; secondly, experts, such as critics and curators acknowledge an artist's talent; thirdly, gallerists and collectors are becoming interested and only then the general public is beginning to acknowledge an artist's work. Although the art market has significantly changed since 30 years ago, these 4 steps of an artists' path to recognition still entail that some kind of intermediary, which positions the artist among other competitors, is signalling that these gate-keepers are vital for artists' career success also in today's art world.

In the case of art markets, the most important intermediaries and gate-keepers are art galleries (Prinz et.al., 2015). According to Art Basel and UBS art market report (2020), sales through galleries (including participation in art fairs) constitute 58% of the total sales in the global art market. The art market entails a substantial amount of uncertainty about quality and value but galleries can diminish the magnitude of the problems that arise in two-sided markets with matching the supply (artists) and demand (collectors) parts of the art market. Art galleries are the intermediaries which transmit knowledge about the talent and quality of new artists' works, as new artists have not yet built their brand and reputation in the market. Scholars argue that art galleries can be particularly important to emerging artists' careers, as they provide a

platform for artists to exhibit their art and finance institutional shows that promote the artist in the market (Di Caro et. al, 2020). Moreover, galleries tend to have a specific brand, which entails their hierarchical position in the art market. This position has a significant influence on purchasing decisions of art collectors since the brand of the gallery plays an important role in terms of signalling for quality and value (Prendergast, 2014). This is why the pricing in the art market is dependent on collaborative practices of the galleries as intermediaries who are certified to select, promote and distribute art (Becker, 1984). Di Gaetano et.al. (2019) researched the allocation of artists in the contemporary art market and addressed why not having an option to join a top gallery negatively impacts art production (innovation) and its market value. The authors found that 'superstar' artists, who encompass creativity and innovation tend to be represented by top galleries with high bargaining power and a lot of rich collectors in their clientele, however, younger (and more creative) artists, who have yet to innovate, usually end up in galleries, which have small bargaining power and cannot charge abnormal prices for innovation. Further, Prinz et.al. (2015) also argue that at the start of their careers, individual artists have little or no bargaining power, but as the reputation grows with multiple representations by important art galleries, the artists gain more bargaining power, which eventually leads to success in the art market. Therefore, if an artist is represented by a gallery, it can significantly increase the artist's recognition, provide approval of quality and value among market participants, eventually positively impact the average price of an artist's art and overall provide a substantial leap towards the success of an artist's career.

Participation in Art Fairs

As we have come to know them today, Art fairs have been an important part of the art market for many centuries, however, only in the last decades, art fairs have sprung to be one of the leading platforms for buying and selling art. In the early 2000s, there were only 55 well-established art fairs around the world. However, as of 2020, almost 300 art fairs are occurring each year. Although the majority of art fairs take place in Europe (51%) and the USA (28%), the locations of the fairs have dispersed around the world. As the culture of art fairs has expanded geographically, the amount of art fairs visitors has followed. According to Art Basel (2020) report, in 2019, the top 20 most attended fairs attracted 1.2 million visitors.

According to academia, art fairs have become so popular because of globalization and the rapidly growing role of 'mass culture' structures. What is more, the emergence of the internet and various information and communication technologies has accelerated the demand for the arts due to the fact that commercial information about art has become more accessible and consequently has decreased the existing information asymmetry in the art

market (Baia Curioni, 2012; Barragan, 2008). All of the aforementioned aspects have paved the way for art fairs to become a significant part of the art market. Only a few decades ago, the art market was dominated by auction houses but as of 2020, nearly 50% of the art market is represented by art fairs (Art Basel, 2020). The same report informs that nowadays the gallery business is highly dependent on art fairs, as sales in art fairs constitute approximately 45% galleries' annual revenue streams.

Although several art fairs focus on selling fine arts, decorative arts or antiques, the majority of fairs are focused on creating a temporary marketplace for contemporary art sellers and buyers. Therefore, the role of art fairs is even more important in the market for contemporary art and can contribute to the recognition and commercial success of contemporary artists. However, a common practice requires that an artist is represented by a commercial gallery because galleries (and not artists) rent commercial spaces, commonly known as booths, to participate in a particular art fair.

Participation in Biennials

Held for the first time in Venice in 1985, an art biennial is a 'large international exhibition held every two years' (Tate, n.d.). Biennials, often also styled as biennales are few of the most substantial drivers of artistic globalisation as these events allow to materialize art and culture across local and international settings. These events are also rather crucial when it comes to transferring and generating knowledge about contemporary art and setting new trends and directions for artists and curators (Kompatsiaris, 2013). In the last couple of decades, the art world has become saturated with different biennials across the world. Cultural economists describe this phenomenon as 'biennialization'. Up to the 1990s, approximately 10 biennials took place every two years around the world, however, as of the second decade in the 21st century, more than 100 biennials take place every two years on a regular basis.

Biennials are important because of a number of aspects. Firstly, biennials have been fostering the boom in the international spending of contemporary art (Tate, n.d.). Although these events are not primarily focused on buying and selling of contemporary art, it plays the role of a 'middle man' because the exhibiting artists have a great opportunity of bringing awareness about their name and work in a place which is attended by many influential insiders or gatekeepers of the art world, such as gallerists, collectors, curators and arts journalists. Secondly, art biennials can be seen as the sites of symbolic production. Symbolic production is what determines a style, genre or an artist to be relevant in a system of classifications. In this sense, the symbolic production is the final step in the production of an

artwork that leads to the artist's positioning in the field and includes also reception. Also, it is a signal of quality and value (Sassatelli, 2017). Both of these aspects convey the message that art biennials are a crucial aspect of today's art market and act as an important part of the career success of a contemporary artist.

Recipiency of Awards and Grants

As previously discussed, the art market is very uncertain in terms of information on quality. The credentials of the experts are their cultural capital, which has been gained through years of work in the field and an extensive learning process about the criteria for selection process and rewards (Bourdieu, 1984). Therefore, the role of different gatekeepers and experts is substantial, since their opinions can reflect the true quality (Ginsburgh, 2003). Experts' opinions can have a significant impact on both the career path of the artist, but also on the buyers' purchasing decisions. When it comes to various prizes in the visual arts field, the experts are the ones who have critical authority about the artists, which will receive the prize. Ginsburgh (2003) presented 3 case studies about the role of awards and prizes on success and aesthetic quality in the creative industries. The author studied the movie industry and the Oscars, the book industry and the Booker Prize, and the classical music industry with The Queen Elisabeth Piano Competition as the main reference event. The author concluded that winning an award or prize in the creative industries is usually associated with success (particularly in the case of the piano competition, however, Ginsburgh (2003) acknowledges that awards are not a proper representation of talent or quality. Further, Penet & Lee (2014) researched the impact of the Turner Prize, the most prestigious contemporary art award in the world, on the value of the artworks by the participants after the prize. The authors conclude that the Turner Prize (as well as other prizes in the art field) has promoted the process of 'hastened success'. This concept entails that the artists gain recognition and market success earlier in their careers than it was before when the incremental valuation process of a young artist was determined through a long period of accumulating recognition before gaining economic success.

Although grants serve a different function than prizes in the contemporary art field, the selection process for grants includes competition and often works as a contest where the best project or the most talented individual receives the stipend, which can act as a helpful tool for an artist to participate and excel in artistic projects. Subsidization of the arts is a highly discussed topic by Abbing (2002). The author acknowledges that the average incomes in the arts are low compared to other industries, therefore, subsidies play an important role in the careers of artists and have direct and indirect effects. When analysing the Dutch

governmental support for the arts, Abbing (2002) finds that the direct effect of subsidies is that the average income of artists increases, however, it can increase income distribution as more successful artists tend to receive more grants and subsidies. On the other hand, the indirect effects can act as signalling. When a grant is instituted, the recipients may also receive honour and fame that signals the market that the artist is talented and worthy of public or private support in comparison to others. In conclusion, Abbing (2002) declares that the amount of subsidies is highly correlated with the number of artists since the latter always adjusts to the subsidy levels. In this case, the indirect effects of honour and fame encourage more people to enter the arts, eventually pushing the average incomes back to the initial level.

Fame and Attention

Lastly, when discussing various factors of success, one has to mention the role of fame and attention. The art market just like other markets in the cultural and creative industries are rather skewed in terms of the income distribution - a small number of artists receive the majority of income, while the latter struggle to make a living out of their artistic practice. Rosen (1981) describes this phenomenon as the *superstar effect* since the few people in the industry "dominate the activity in which they engage". However, Adler (1985) argues that superstar effects are not predominantly determined by one's talent. Out of two artists who exhibit similar talents, one may become a superstar while the other does not. The author acknowledges that this is due to knowledge. Knowledge about artists is gained through different intermediaries and with involvement in discussions that foster knowledge about a particular artist. This means that artists, who are familiar to a greater public will be better off and will be one of the few at the left side of income distribution although they have the same talent as an artist who is less known. The superstar effects are highly interconnected with the economics of attention, a widely discussed concept by Lanham (1989). The author argues that we live in the information age and that nowadays information is one of the most valuable assets. Consequently, in the information economy, human attention has become the "real scarce commodity" (Lanham, 1989 p.46) that drives social change and translates into economic value. Attention and fame can be also described as 'buzz', a concept introduced by cultural economist Scott (2012). The author argued that 'buzz' is the attention that various artists create around their work and can be seen as a type of free capital, which can turn a financially constrained artist into a trend that is sold in the ever-changing market for culture. Scott (2012) argues that 'buzz' can be created by transforming three forms of capital: (1) social capital, which entails social contacts and networks among different market

participants; (2) cultural capital, which covers historically transmitted cultural knowledge; and finally (3) symbolic capital, which indicates prestige, fame and reputation that an artist has accumulated throughout the career.

Successful artists, such as Andy Warhol and Christo and Jeanne-Claude are described as the economists of attention, as the artists achieved their artistic and economic success by driving and exploiting the benefits of attention. Nowadays, attention can be measured in many different ways, such as measuring website traffic, media traffic or social media following and engagement (Signal, 2019). From this, one can affirm that the factor of fame and attention from consumers and insiders can determine which artist becomes a superstar is vital. In the case of Dutch visual artists, this fame and attention can be materialized through media channels, such as social media following, interviews, mentions in art media and publications

2.2. Theoretical Framework

This part of the study focuses on relating the concepts, which were discussed in the literature review, in a theoretical framework. The framework combines the participation in an artist-in-residence program with the success factors of an artist's career. In total, 3 types of success determinants were derived: the artistic success, commercial success and the Artfacts ranking.

Accordingly, the first hypothesis of this study is regarding artistic success. The artistic success in this research is meant by several factors. Firstly, it counts participation in biennials. Participation in biennials signals artistic success because these events transmit a high level of artistic quality and symbolic value (Sassatelli, 2017). The second component of artistic success is solo shows in public institutions and non-profit organisations. Such exhibitions raise the prestige of an artist and signals about artistic quality as important public institutions are intermediaries which often have high artistic standards and play a prestigious role in the art market. Finally, artistic success can be derived from the recipiency of awards in the field because expert opinion can be a noticeable signal about true artistic quality and success. Since artist-in-residence programs allow the artist to perfect their craft and be fully devoted to art, as well as expose the artists to more gatekeepers and intermediaries, it is expected that the participation in artist-in-residence programs is positively and significantly correlated with the artistic success, thus:

***H1**: Participation in an artist residency is positively and significantly correlated with the artistic success of an artist.*

The second hypothesis is regarding commercial success. The commercial success in this research is described by several factors. Firstly, it includes art fairs. Art Basel (2020) report declared that nowadays art fairs constitute nearly 50% of revenue in the art market, therefore, this phenomenon is also a crucial aspect of an artist's commercial success. Secondly, representation by a gallery and solo shows in galleries. Prinz et.al (2015) affirmed that galleries are the most important gate-keepers for artists, thus, the artists, who are represented by a gallery and exhibited in commercial gallery spaces, are more likely to be recognized and sold through dealers and in art fairs. The last component of commercial success is the recipiency of grants. Grants and subsidies can have a paramount impact on the careers of artists, especially in the early stages of their career because these grants can help the artists to be fully devoted to the arts without having to work in other industries to support their artistic practice. It is expected that participation in artist-in-residence programs is positively connected to the commercial success of artists because residencies develop an artist's professional network and help to reach various gate-keepers of the art market. Thus, the second hypothesis is the following:

***H2**: Participation in an artist residency is positively and significantly correlated with the commercial success of an artist.*

Lastly, the Artfacts database artist ranking. The ranking combines mainly exhibition data (including art fairs and biennials) and, therefore, can be seen as a metric for an artist's career success. Since it combines nearly all activity of an artist's professional life, it is expected that also this ranking is positively impacted by the participation in an artist residency.

***H3**: Participation in an artist residency is positively and significantly correlated with the artist's ranking in the Artfacts database.*

3. Methodology

3.1. Research Design

To answer the proposed research question, a quantitative research design was employed. Quantitative research methods are prevalent in studies which include the collection and analysis of numerical data in the pursuance of finding a relationship between theory and research as deductive (Bryman, 2016). More particularly, this research follows causal-comparative research design as it aims to find a cause-effect relationship between success determinants and participation in an artist-in-residence program. According to Johnson (2001), the causal-comparative research design is one of the simplest and most effective quantitative approaches to explore cause-and-effect relationships between dependent and independent variables. This research method requires quantitative data and is analysed by employing statistical methods.

3.2. Data Collection Method and Data

Particularly in the art world, success can be a hard concept to define because it entails artistic and commercial success. According to the literature, there are many variables, which could influence these career success therefore, the data needed for this research had to be gathered unconventionally. The original dataset for this research was constructed using Dutch contemporary artists' curricula vitae (CV). According to Gaughan and Bozeman (2002), the CV is an accurate representation of a person's career path that covers both academic and professional advancements of the career. CV as a primary data source has been used in various researches regarding mobility, performance and career transitions of professionals in various industries, especially among researchers in the academia (Gaughan & Robin, 2004). However, regarding this research, the CV was used as a tool to determine the career paths of Dutch contemporary artists.

Several sets of data were manually extracted from each Dutch artist's CV and transformed into variables that constitute the final dataset:

1. Demographic data – name, surname, gender, age, place of residence and education. Consequently, these were the variables included in the dataset: *Gender* (dummy; 1= woman, 0=male), *Age* (the age of the artist as of 2020)*, Education_Dutch (*dummy; 1= Dutch university diploma, 0= if otherwise), *Education_Foreign (*dummy; 1= Non-Dutch university diploma, 0=if otherwise), *Master_Degree (*1=has Master' degree, 0=if otherwise)

2. Participation in artist-in-residence programs – whether has participated, when, where. Variables in the dataset: *Residencies* (the number of completed residencies).
3. Representation by galleries – whether the artist is represented by a gallery, and where. Variables in the dataset: *Representation* (dummy; 1= if the artist is represented by a gallery, 0=if otherwise), *Representation_Dutch* (dummy; 1= if the artist is represented by a Dutch gallery, 0=if otherwise) and *Representation_Foreign* (dummy; 1= if the artist is represented by an international gallery, 0=if otherwise).
4. Group and solo exhibition. An additional dataset for all institutions where solo shows have taken place Variables in the dataset: *Total_Shows (*all shows throughout the career), *Solo_Shows* (all solo shows throughout the career), *Group_Shows* (all group shows throughout the career), *Solo_Galleries* (the number of solo exhibitions in commercial galleries) *Solo_Institutions* (the number of solo exhibitions in a public institution, such as a museum or 'kunsthalle'), *Solo_NonProfit* (the number of exhibitions in non-profit or artist-run spaces). Lastly, two variables that detect solo shows before and after completing the first residency – *Solo_Before* and *Solo_After*.
5. Participation in art fairs– a distinction between how many, when and where. Variable in the dataset: *Art_Fairs* (the number of participations in art fairs throughout the career).
6. Participation in biennials and triennials - a distinction between how many, when and where. Variable: *Biennials* (the number of participations in biennials/triennials throughout the career)
7. Awards and grants – how many, which and when. Variables in the dataset: *Awards* (the number of awards won in the field) and *Grants* (the number of grants and stipends received throughout the career)
8. *Publications* (mentions in catalogues, self-published publications) and *Media* (articles reviews, interviews on the internet)
9. Artfacts ranking. Variable in the dataset: *Artfacts* (the ranking of the artist in the Artfacts database in February 2020).

However, this data collection method proposes the problem of unobserved variables. In particular, the CVs do not capture any data on prices or sales of artworks. This proposes a significant bias towards determining the commercial success of an artist because prices would be the best continuous variable to include in statistical models, which aim to find the relationship between commercial success and participation in residencies.

3.3. Sample

Artfacts.net is one of the leading arts databases, combining information and giving valuable insights about artists, galleries and exhibitions around the world. Currently, the database collects information about 674,803 artists, 24,041 galleries, 7,467 museums and has kept track of 674,803 exhibitions, which date back to the 19th century, since the database was established in 2001 (ArtFacts, n.d.). Based on the vast data in the database, in 2004, Artfacts introduced an artist ranking, which 'measures fame'. The main assumption of the quantitative ranking, which is constructed using exhibition data as the main variable, is that exhibition data is the key factor, which determines the value and success of an artist. Additionally, Artfacts has created a ranking for commercial galleries, which determines the prominence of the gallery in the field based on various aspects, such as represented artists, exhibitions and participations in art fairs.

The research aims to find the impact of participation in artist-in-residence programs on Dutch contemporary artists. Since Artfacts is the largest database of artists in the world, the same database was used to retrieve a list of Dutch contemporary artists. Many residency programs require artists to have professional experience before the participation in the program and the impact of the participation in the residency on the artist's career can be seen only a few years later in the career. Therefore, the age filter of living male and female artists born in 1979 and later were chosen for this study. After adding nationality and age filters, Artfacts database gave an output of 108 artists, who met the criteria. The sampling method was non-random, meaning that the sample was carefully chosen based on a set of criteria. Further, in the data collection process, these 108 artists were divided into two groups – the ones who have participated in an artist-in-residence program and those who have not. After collecting the data from CVs, which were available online, 19 of the listed artists were not suitable for the research or their CV could not be found and analysed. However, out of the remaining 86 artists in the sample, 59 had participated in an artist-in-residence program and 27 had not.

3.4. Data Analysis Method

3.4.1. Descriptive Statistics and Correlations

The first step of data analysis in this research was determining the descriptive statistics of the sample. Descriptive statistics are often used to measure statistical aspects of a population or a sample (Bickel & Lehman, 1975). It is a numerical procedure that helps to organise and describe various aspects and factors of a sample. Most commonly, descriptive statistics are

used to determine the mean, median and variance of various variables in the sample (Fisher & Marshall, 2009). In the case of this research, 2 sets of descriptive statistics will be performed: (1) of the total sample, which includes all artists; (2) descriptive statistics of the sample group which features artists who have participated in an artist-in-residence program. By distinguishing the statistics for each group, an overview of the demographic and career variables across the groups was determined.

The next step of data analysis was correlational analysis. Correlation analysis is used to determine relationships between quantitative and continuous variables. To find correlations between variables in the data of this study, Pearson's correlation was used. Pearson's correlation is a beneficial correlation coefficient when a relationship between two variables has to be determined. By plotting a scatter plot, this method allows for finding linear relationships between the variables. Although correlational analysis allows retrieving data about relationships between two variables, it does not incline causal relationships (Mahoney, 2001). Therefore, one ought to perform regression analysis – the last and final step of data analysis.

3.4.2. Regression analysis – OLS and 2SLS estimator

In order to arrive at the answer for the research question, regression analysis in this study was performed in two steps: (1) the ordinary least squares (OLS) regression and the two-stage least squares (2SLS) regression. The OLS estimator was used to determine the significance of relationships between variables, however, the 2SLS was used to ascertain causality, namely whether participation to residencies has an impact on success defined by the success determinants which present significant results in OLS regressions. All statistical analysis actions were performed in statistics and data science software STATA.

Three OLS regressions were run. The first regression regarding the variables constituting to artistic success. Among the potential candidates for artistic success, we select as the dependent variable of the first regression *Biennials* because biennials are considered to be the most prestigious and artistically saturated events in the art world. Taking into account the results from the correlation matrix, the independent variables of the regression were *Residencies* (the number of residencies completed), *Solo_Institutions* (the number of solo exhibitions in a public institution, such as, a museum or 'kunsthalle'), *Solo_NonProfit* (the number of exhibitions in non-profit or artist-run spaces), *Awards* (the number of awards won in the field), *Media (*the number of articles, reviews, interviews on the internet) and two control

variables – *Solo_Before* and *Solo_After*, which record solo shows before and after the first residency was completed. Ultimately, the regression equation was the following:

$$(1) \quad Biennials = \beta_0 + \beta_1 (Residencies) + \beta_2 (Solo\_Institutions) + \beta_3 (Solo\_NonProfit) + \beta_4(Awards) + \beta_5(Media) + \beta_6(Solo\_Before) + \beta_7 (Solo\_After) + \varepsilon$$

However, artistic success does not correspond to commercial success. In fact, Di Gaetano et.al (2019) found that artists often are not consistent with profit-seeking strategies. Therefore, a second regression was then run with *Artfairs* (the number of participations in art fairs) as the dependent variable of this regression) Although the best dependent variable for such a regression would be prices and sales in auctions, this kind of information is almost impossible to gather because it is rarely that young and even critically acclaimed artists are auctioned. Instead, *ArtFairs* variable was chosen as the dependent variable of this regression because art fairs constitute almost 50% of the art market today and act as a major component of the financial success of contemporary artists in particular. The independent variables of the regression were *Residencies* (the number of residencies completed), *Representation_Dutch* (a dummy variable which states whether the artist is represented by a Dutch gallery), *Representation_Foreign* (a dummy variable which states whether the artist is represented by an international gallery). It is important to include these variables because it is a common practice that galleries participate in art fairs, not artists on their own, therefore, the number represented by a gallery is crucial for participation in art fairs. Representation variables were included only in the model for commercial success because the location of a commercial gallery does not impact quality of an artist's work, however, it impacts the sales of artworks because the galleries have access to collectors in the home market. *Solo_Galleries* (the number of solo shows in commercial galleries) may explain commercial success because such shows are primarily organised to sell artworks. Lastly, control variables *Grants* (the number of grants received throughout the career) and *Media (*the number of articles, reviews, interviews on the internet) were included in the model.

$$(2) \quad ArtFairs = \alpha_0 + \alpha_1 (Residencies) + \alpha_2 (Representation\_Dutch) + \alpha_3(Representation\_Foreign) + \alpha_4(Solo\_Galleries) + \alpha_5(Grants) + \alpha_6(Media) + \varepsilon$$

The third OLS regression exploits the Artfacts index as a comprehensive measure of success since this is built on the information including both the commercial as the artistic

success of an artist. The Artfacts ranking is a composed number of all group and solo exhibitions, art fairs, biennials that an artist has participated in throughout his/her career. Therefore, *Artfacts* (the ranking of the artist in the ArtFacts database) variable was chosen as the dependent variable. The regressors of this model were the following: *Residencies* (the number of residencies completed), *Solo_Shows* (the total amount of solo shows), *Biennials* (the number of participations in biennials), *Art_Fairs* (the number of participations in art fairs) and finally *Media (*the number of articles, reviews, interviews on the internet). *Solo_Shows, Art_Fairs and Biennials* variables were included because these variables are known to constitute the index, which determines the artist's rank in the database. *Media* variable was added as a control variable.

$$(3) \qquad ArtFacts = \gamma_0 + \gamma_1 (Residencies) + \gamma_2 (Solo\_Shows) + \gamma_3 (Biennials) + \gamma_4 (ArtFairs) + \gamma_5 (Media) + \varepsilon$$

Although the OLS estimator is widely used to determine the relationship between variables, it does not give any output that affirms that there is causality between the variables. Therefore, following the data analysis method from Ginsburgh & Van Ours (2002), who researched the impact of the order of appearance in a piano competition on the success and ranking of the participants of the Queen Elisabeth musical competition, regression analysis with the 2SLS estimator was employed in this study. In their study, the authors created a latent variable, which described success. Further, in order to find causality between the variables, an instrumental variable was implemented. Instrumental variables are used in regression analysis if endogenous variables are present, meaning that the main variables of the regression are influenced by other variables in the regression. By using an instrumental variable, true correlations between the dependent and independent variables can be observed and causality can be determined (Arellano & Bover, 2000). Finally, Ginsburgh & Van Ours (2002) performed the 2SLS model with latent variables and instrumental variables to find causality between the variables.

The 2SLS regression was performed for OLS regressions, which showed significant results for the *Residencies* variable. In order to find, whether there is causality between participation in a residency program and the career success variables, instrumental variable for the *Residencies* variable had to be found. According to Arellano & Bover (1995), there are three conditions that are necessary for an instrumental variable to be met: (1) the instrumental variable has to be exogenous meaning that the variable cannot correlate with the error term, (2)

the instrumental variable has to correlate with the instrumented variable and finally, (3) the instrument has to be external to the regression, meaning that it cannot have any explanatory power of the dependent variable.

4. Results

4.1. Descriptive Statistics

The final sample of this study consists of 86 artists. The descriptive statistics of the whole sample are depicted in Table 1. The sample is rather balanced in terms of gender as 46 of artists are male and 40 are female. The average age of the whole sample is 36.77 years and the vast majority of artists in this sample hold at least a bachelor degree, more specifically – a degree from a Dutch university (93% of artists). However, out of those, who hold a Bachelor's degree, 34 (39.55%) have earned a Master's degree. When it comes to representation by a gallery, 72% of artists are represented by a commercial gallery and of those, who are represented, 70% of the representing galleries are based in the Netherlands. Further, since the beginning of their careers, this particular group of artists have had on average 9.5 solo shows and 43.86 group shows. From the solo shows, on average the most are in commercial galleries (4.59), and the latter are in public institutions (2.02) and non-profit or artist-run exhibition spaces (3.02). When divided between the period before and after the first residency, on average the artists have had a 3.78 solo show before the residency and 3.37 after. The amount of shows before residency is higher because this number also included solo shows of the artists, who never did a residency, however, the values in *Solo*_After variable for such artists is 0. The substantial difference between the amounts of solo and groups shows can be described by the fact that the effort for participating and organizing a group show is less demanding and that young artists, who are not yet established, are not often awarded with an exhibition space for a solo show. Further, the average of participations in art fairs is 4.26 however, on average the artists have participated only in 1.01 biennials. In terms of publications and media, the average publications in the sample stand at 5.56, however, the average amount of interviews, reviews and mentions in the media is 15.73. The mean value for the recipiency of awards in the field is 1.44, but the average of grants received is 2.69. Finally, the overall average Artfacts rating of the artists in this sample is 49280.3.

Appendix A features the descriptive statistics of the sample group which includes artists who have participated in an artist-in-residence program. The group consists of 59 artists, of which 30 are male and 29 are female. The average amount of residencies completed by this

group is 3.37. The majority of artists in this group have participated in residencies both in the Netherlands (79.7%) and abroad (72.95). On average, the artists did their first residency when they were 28 years old. Although many variables exhibit rather similar statistics as in the whole group, some variables show noticeable differences. Group and solo shows appear to be less for this group. The change can be attributable to the fact that these artists have been actively participating in residency programs, which has been at the expense of the number of exhibitions. Moreover, this group has received more grants than the total group because artists are often awarded with a stipend that supports their participation in the residency. Lastly, this group averages rather higher Artfacts ranking (38067) than the total sample, however, it is contradictory due to the fact that the group averages less group and solo shows.

Table 1. Descriptive statistics of the whole sample (N=86).

Variable	0 (No)	1 (Yes)	Mean	Standard Deviation
	Male	Female		
Gender	46 (53.5%)	40 (46.5%)		
Age			36.77	3.70
Education	1 (1.2%)	85 (98.8%)		
Education Dutch	6 (7%)	80 (93%)		
Education Foreign	62 (72.1%)	24 (27.1%)		
Master's degree	52 (60.5%)	34 (39.55%)		
Representation	24 (27.1%)	62 (72.1%)		
Representation Dutch	18 (29%)	44 (71%)		
Solo Shows			9.47	6.53
Group Shows			43.86	24.94
Solo in Galleries			4.59	3.58
Solo in Public Institutions			2.02	2.35
Solo in Non-Profit spaces			3.02	2.71
Solo Before			3.78	5.07
Solo After			3.37	3.39
Art Fairs			4.26	5.06
Biennials			1.01	1.34
Publications			4.56	6.90
Media			15.73	24.96
Awards			1.44	1.86
Grants			2.69	2.95
ArtFacts Ranking			49280.3	43949.7

4.2. Correlational Analysis

The next step in the data analysis process was correlational analysis for the main variables of the study. Doing correlational analysis was necessary for the regression analysis because if the independent variables of the regressions correlate at a high level, the econometric models become biased due to multicollinearity. Therefore, only variables, which do not have a

high level of correlation, can be included in similar regressions. For this purpose, Pearson's correlational coefficient was used. According to Potter (Winter et.al., 2016), there are three correlation threshold values: correlation coefficients <0.4 are considered to be low, correlations between 0.3 and 0.59 are considered to be moderate and correlation coefficients >0.6 are indicating a high level of correlation, thus variables that correlate at a >0.6 could not be included in the same regression models. Pearson's correlation coefficients are exhibited in Appendix B. Correlations larger than 0.3 are highlighted in bold.

One can see that the correlation coefficient between the residencies variable and grants variable is 0.415. These variables correlate at a moderate level because artists are often granted a stipend for their participation in an artist-in-residence program. The highest correlation of 0.6206 in this matrix is between the group show and solo show variables. The high degree of correlation can be attributable to the fact that the artists who have many group shows also have a considerable amount of solo shows. All variables, which were derived from the *Solo_Shows* variable also correlate at a high level. The biennials and group show correlates at a 0.402 level, which is due to the fact that all biennials are large scale group exhibitions. Further, media and publications variables share a 0.4283 correlation coefficient, which is because both of these variables are rather similar and usually shown in the same part of an artist's CV. A correlation coefficient of 0.314 was seen between the publications and grants variable, however, the relationship cannot be explained. Finally, there quite a few significant correlation coefficients between the Artfacts ranking and other variables. All of the correlations are negative because the ranking is reversed, meaning that the smaller the number, the higher the ranking of the artist. Therefore, the negative correlations, in reality, end up as positive correlations. The significant correlations are with solo, group show and biennials variables because the ranking is constructed from all exhibition data. Additionally, the ranking is correlated with the residencies variable, which inclines that the artists, who have participated in a residency program, tend to be in a higher rank than those who have not.

4.3. Regression Analysis

4.3.1. OLS regressions

After seeing the characteristics of the sample and performing correlational analysis, regression analysis was performed. In order to answer the proposed research questions, three OLS regressions were performed. OLS regressions with the robust function were also performed. Although the p-values were better for these regressions, the R^2 and f-values were

smaller. Due to the already small sample size, it was decided that robust regressions will not be performed. The results of these regressions are depicted in Table 2

Table 2. Results from OLS regressions (N=86).

Independent Variables	Model 1 -Artistic Success (Y=*Biennials*) R^2=0.16	Model 2- Commercial Success (Y=*Art Fairs*) R^2=0.19	Model 3- ArtFacts ranking (Y=*ArtFacts*) R^2=0.33
	β (t-value)	*β (t*-value)	*β (t*-value)
Residencies	0.2363*** (2.94)	-0.3264 (-1.34)	-3171.9860* (-1.69)
Total_Shows			
Solo_Shows			-1965.5850*** (-2.82)
Solo_Gallery		0.3023**	
Solo_Institution	0.135** (2.12)		
Solo_NonProfit	0.0378 (-0.60)		
Awards	0.1020 (1.37)		
Grants		-0.0516 (-0.26)	
Media	0.0033 (0.59)	0.0069 (0.33)	-280.4557* (-1.68)
Representation_Dutch		3.5409*** (2.79)	
Representation_Foreign		2.5003 (1.59)	
Art_Fairs			-166.5405 (-0.20)
Biennials			-8015.9230** (-2.43)
Solo_Before	0.0733** (2.10)		
Solo_After	0.0692 (-1.36)		

Significance levels: *** p<0.01; ** p<0.05; * p<0.1

The first regression regarding artistic success measured the relationship between the participation in biennials and participation in residencies, as well as other artistic success-related variables. Firstly, the *Residencies* variable was significant at 1% level. It indicates that participation in one additional residency leads to 0.2363 more participation in biennials, keeping everything else constant. Based on the results in OLS regression, the first hypothesis (H_1), which states that participation in an artist residency is positively and significantly correlated with the artistic success of an artist, is confirmed. Secondly, the *Solo_Institutions* variable, which was significant at 5% level. The coefficient indicates that a 1 additional solo show in an public institution leads to 0.1477 more participations in biennials, keeping everything else constant. The third significant variable was *Solo_Before* and it was significant at 5% level as well. This means that having an additional solo show before completing a residency and all solo shows for artists, who have not participated in a residency program, means 0.0733 more participations in biennials, everything else held constant. The R^2 of this regression is 0.25, meaning that 0.25 of the variance in the dependent variable is explained by the independent variables. To avoid biased coefficients, heteroskedasticity has to be checked because if there a problem of heteroskedasticity, the predicted p-values tend to be smaller than

they should be. When performing the Breusch-Pagan test for heteroskedasticity, the Chi squared value is 16.22, meaning that the H_0, which states that the residuals have a constant variance, is rejected, therefore, the OLS regression has problem of heteroskedasticity**.** This means that the OLS estimator may not be the best linear estimator to determine the significance of relationships between the variables because standard errors may be biased. In further research, it could beneficial to use robust standard errors or other estimators, which may deliver better results. One of potential suggestion would be to use the Generalized Least Squares (GLS) estimator.

Although the results from the regression show a significantly positive relationship between residencies and biennials, the relationship cannot be characterised as causal. In order to check causality, 2SLS regression with an instrumental variable was performed in the final step of data analysis, as shown before.

The second OLS regression was regarding the commercial success of the artists. The regression covered the relationship between participation in art fairs and residencies, as well as other commercial success-related variables. According to the model, there is no significant relationship between *Art_Fairs* and *Residencies*, however, significant results showed for 2 other variables. The first significant coefficient was for the *Solo_Gallery* variable, which was significant at 95% confidence interval. Based on the model, having one more solo show in a commercial gallery leads to 0.3201 more participations in art fairs. The second significant coefficient was for the *Representation_Dutch* dummy variable. The relationship was significant at 1% level and inclines that if the artist is represented by a Dutch gallery, the participation in art fairs increases by 3.5409, everything else held constant. The R^2 of this regression was 0.25, meaning that 0.25 of the variance in the *Art_Fairs* is explained by the independent variables. Like the first regression, this model is biased due to heteroskedasticity problem as the Chi squared value is 11.74. Based on the results of this regression, the H_2 , which declares that participation in an artist residency is positively and significantly correlated with the commercial success of an artist, was not significant and could not be accepted. Significant results were not evident due to a few reasons. Firstly, because participation in art fairs is not the best variable for describing commercial success. Instead, prices of sold works would have been more explanatory. Then, there are variables, which probably were not included in the model causing omitted variable bias.

The last OLS regression was for the Artfacts ranking. The model aimed to find a significant relationship between the Artfacts ranking and participations in residencies, as well as other variables which constitute to the ranking. Since the best artist has the rank Nr.1., this

variable is reverse, meaning that all negative correlations and relationships are actually positive, as it is better to be have a smaller number in the ranking. According to the model, the *Residencies* variable significant at 10% level and the interpretation of the coefficient is that having participated in one more residency program, the artist will rise up by 3171.986 places in the Artfacts ranking, everything else held constant. Since *Solo_Shows* are a particle which contribute to the ranking, it was expected that the relationship with the ranking would be positive. Indeed, the variable is significant at 1% level and inclines that having one additional solo show leads to a 1965.585 rise in the ranking. Further, a significant (at 5%) coefficient was for the *Biennials* variable. According to the model, participations in biennials have the greatest effect on the Artfacts ranking, as one additional participation in a biennial predicts a 8015.923 rise in the ranking. Finally, the *Media* article showed statistical significance at 10% level. Although it is known that this variable does not constitute to the ranking, it is expected that it has a significantly positive relationship with the ranking because the model predicts that an additional review, interview or article in the media facilitates a 280.4557 rise in the ranking, everything else held constant. Out of all OLS regressions performed, this model exhibited the best R^2 of 0.33. Unfortunately, the Breusch-Pagan test for heteroskedasticity showed that this model potentially is biased as the Chi squared value was 15.00. To conclude, the results from this model indicate that the H_3 that participation in an artist residency is positively and significantly correlated with the artist's ranking in the Artfacts database can be accepted. However, the causality of the relationship can be determined only in the next step of the analysis.

4.3.2. Instrumental Variable and 2SLS Regression

The next step of data analysis was performing the 2SLS regression with an instrumental variable. By employing this method, causality between the *Residencies* variable and the *Biennials* and *Grants* variable could be found. However, in order to do so, an instrumental variable had to be found. The variable that met the criteria the most was the *Grants* variable, which covers the data about the recipiency of grants throughout the career. This variable was suitable for the method because of three criteria. Firstly, it did not correlate with the error terms. Secondly, it had a considerable correlation with the *Residencies* variable (r=0.415). Lastly, the *Grants* variable does not explain any variance in the *Biennials* and *Artfacts* variable, making the *Grants* variable external to both regressions. Thus, the *Residencies* variable was instrumented by the *Grants* variable and two 2SLS regressions were run. The results from these regressions are depicted in Table 3.

Table 3. Results from 2SLS regressions. (N=86).

Independent Variables	Model 1(Y=Biennials) R^2=.	Model 1(Y=ArtFacts) R^2=0.0534
Instrumental variable: *Grants*	β (*z*-value)	β (*z*-value)
Instrumented: *Residencies*	**0.8771***** (2.70)	3580.969 (072)
Solo_Shows		-2533.995*** (-3.09)
Solo_Institution	0.0432 (0.47)	
Solo_NonProfit	-0.2119* (-1.83)	
Solo_Before	0.1981*** (2.65)	
Solo_After	-0.1795** (-2.13)	
Art_Fairs		378.1713 (0.40)
Biennials		-9697.77*** (-2.69)
Awards	0.1690* (1.68)	
Media	-0.0060 (-0.71)	-373.7346** (-2.02)

Significance levels: *** p<0.01; ** p<0.05; * p<0.1

After running the 2SLS regressions, it became apparent that using an instrumental variable can lead to valuable results, which show causal relationships. After running the regression, a test for endogeneity was performed. According to the Durbin-Wu-Hausman test, the instrument (*Grants)* was endogenous, as the f value was 7.76 and was significant at 1% level. The result indicates that the instrument was used correctly and did not propose any bias, which meant that the results are significant. Moreover, the relationship can be described as causal because grants are the determinant of residence based on the strong relationship between the variables, which is also confirmed by an OLS regression in which the dependent variable was *Residencies* and the dependent variable was *Grants*. According to the estimator, *Grants* explain 17.22% of the variance in *Residencies* and that one additional grant leads to 0.3270 more residencies (significant at 1% level). Further, according to model 1 in Table 3, which measures the impact of residencies on participation in biennials, the *Residencies* variable is strongly (at 1% level) significant and indicates that participation in artist-in-residence programs has a positive impact on participation in biennials, thus artistic success. In particular, participation in one additional residency translates into 0.8771 increase in participation in biennials, everything else held constant. When it comes to other variables in Model 1, the results from 2SLS regression were better than in the OLS as coefficients and significance for some variables was stronger using the 2SLS estimator. Such variables were *Solo_Before* and *Solo_After*, of which only the first one was significant in OLS, however, in the 2SLS regressions, these variables were significant at 1% and 5% level, respectively. What is more, this regression changed the sign for the *Solo_NonProfit* variable (significant at 10% level). Now the coefficient indicated that having one more solo show in a non-profit

institution, leads to a decrease in participations in biennials by 0.2112, everything else held constant.

Model 2 in Table 3, which aimed to find that participation in artist-in-residence programs positively impact an artist's ranking on the ArtFacts database, did not give the anticipated results. The *Residencies* variable was not significant, thus it was confirmed that participation in artist-in-residence programs does not have a positive impact on an artist's ranking. However, since the *Residencies* variable was relatively highly correlated with the *Artfacts* variable and in OLS regression, the relationship was significant, it could be possible that the expected results were not evident due to a wrong choice of the estimator or the instrumental variable being too weak. In further research, it could be beneficial to perform the regression with a different estimator, such as the Limited-information maximum (LIML) estimator, which tends to outperform the 2SLS estimator when instrumental variables are weak (Bekker & Wansbeek, 2014).

5. Conclusions

This part of the paper is dedicated to the discussion of the obtained results. First, the research question of this study is answered and then, implications for the industry and academia are discussed. Further, the limitations and possible biases of this research and proposes improvements for future studies regarding this topic are acknowledged. Finally, concluding remarks are made.

5.1. Discussion of Results and Implications

This thesis attempted to answer the research question: How does the participation in artist residencies impact the career success of Dutch contemporary artists? To answer the proposed question, the career success was distinguished in three aspects: the artistic success, the commercial success and Artfacts index, which is an inclusive measure of success that captures both the artistic and commercial success. After extracting the data from the artists' CVs and performing regression analysis, the research question could be answered.

Firstly, regarding artistic success. Biennials are considered to be the most prestigious and artistically excellent events in the contemporary art market (Sassatelli, 2017). Having participated in these large-scale exhibitions, which take place every two years, is a signal that the artist can deliver an innovative and artistically valuable production, which has the potential to have symbolic value and place the artist among other artists in the market. Therefore, biennials were chosen as the main determinant of an artist's artistic success. On average, all

artists in the sample had participated in 1 biennial throughout their careers. When analysing participations in biennials with regards to participations in artist residencies and other control variables, it became apparent that artist residencies have a positive impact on the participations in biennials, which inclined that the effect was also positive on the artistic success of Dutch contemporary artists born from 1979. The impact was verified by using an instrumental variable – grants, which captured the number of grants that an artist has received throughout the career. As artists often receive grants to participate in the residency programs, it was used as a determinant of the residency. According to Hunter-Doniger & Berlinsky (2017), one of the main purposes of artist-in-residence programs is to promote creative skills and to manifest an artist's artistic development. Therefore, if it is proven that artist residencies have a positive impact on artistic success, it means that the main purpose of the programs is realized. Also, this study proves that the generous Dutch public funding, which is invested in supporting artists' artistic development, is justifiable and advisable. In the Netherlands, the institutions, which provide artists with the necessary funds to participate in an artist-in-residence program, are the following: Mondriaan fund, which aims to fund residencies to penetrate the practices of Dutch artists and to promote Dutch art; Fonds Kwadraat, an interest-free publicly funded loan, which an artist can apply for to participate in a residency and Fonds BKVB, which is the largest national body, which sponsors visual artists to develop their work (Transartists, n.d.). All of these institutions can use this study to review and reflect on the impact that the funding, which is put into supporting the residency initiatives, is making on the artists' development and career success.

Secondly, regarding the commercial success of an artist. Nowadays, art fairs have become a cult in the art world that composites nearly 50% of all sales in the global art market (Art Basel, 2020). Accordingly, art fairs have become one of the main sources of revenue both for commercial galleries and artists. Therefore, participations in art fairs were chosen as the main determinant of commercial success. On average, all artists in the sample have participated in 4.26 art fairs, however, this number is smaller for artists who have participated in a residency program. Out of all artists in the sample, 62 or 72% are represented by a gallery and of those who have completed at least one residency program 47 or (80%) are represented by a gallery. The regression analysis proved that if the artist is represented by a Dutch gallery, it is likely that the artist will participate in more art fairs and have more solo shows in commercial galleries than an artist, who is represented by a foreign gallery or not represented at all. This inclines that representation by a gallery is likely to lead to more commercial success. However, when the relationship between participation in art fairs and participation in residencies was

tested, it became evident that the having participated in an artist-in-residence program cannot be associated with commercial success later in the career. The relationship could have not appeared significant because the price or sales variables were not available or indeed residencies do not have any influence on commercial success. An additional explanation can be attributable to the specifics of artists' labour market. While some of the artists have earned the 'superstar' status and earn abnormal incomes, the latter may have to work in other professions to sustain their artistic practice (Alper & Wassall, 2006). While the sample of 86 artists included such renowned Dutch contemporary artists like Femke Herregraven and Jonas Staal, who have often exhibited in world-class exhibition spaces and are represented by top galleries, the majority of artists in the sample have yet to conquer the international art market and earn commercial success.

The last component that described success in this study was the artist's ranking in Artfacts index, which is constructed from all exhibition data, including art fairs and biennials, the determinants of both the artistic and commercial success. The average ranking of the artists in the sample was 49280, however, for artists, who have completed at least one residency program, the average ranking was 38067. At first glance, it looks like the residencies may have a significant impact on the ArtFacts ranking. When the variables were put in a regression, it turned out that the relationship indeed is positive and significant, however, when the relationship was analysed with an instrumental variable and the 2SLS estimator, the relationship turned out to be insignificant, indicating that residencies do not have a causal effect on the ArtFacts ranking. This result invites to additional empirical analysis, as suggested in the following discussion.

5.2. Limitations and Further Research

There are limitations of this research that could confine the results of this research and could draw opportunities for future research in this field. Firstly, one ought to mention the limitations within the dataset. As already it was mentioned, the success of an artist's career is a heterogeneous concept, meaning that it entails various aspects, thus, variables which have to be recorded to draw meaningful conclusions. Therefore, some crucial variables may have been omitted. A few of such variables are price and the sales of artworks, which would be necessary to include in any further research that aims to find the impact of artist-in-residence programs on the commercial success of an artist.

Secondly, if further research is performed regarding this topic, it would be advisable to increase the sample size because, during the process of data collection, it became apparent that some artists' CVs were not eligible for the study or were not available online, eventually leading to a rapid decrease in the final sample size. This could be done by expanding the study to a sample, which includes also Belgian and Luxembourger artists (expanding to BENELUX countries). Such a choice would be beneficial because these three countries share a rather similar geographical and cultural context, as well as practices in the visual arts. By doing so, coefficients and significance levels in the regression analysis could be improved.

Thirdly, for any further research in this field, the causality analysis should be reinforced in two ways: (1) by using a different instrumental variable than *Grants,* eventually leading to more precise predictions of the coefficients (2) or introducing an additional instrumental variable. One of such variables could be related to the representation by a gallery. By the introduction of another instrumental variable, the model would be over-identified, meaning that there would be multiple ways to predict a consistent estimator for the parameters. Lastly, the data from the CVs could be analysed in a different way. The best way to detect the impact of artist residencies on various career success variables would be if the data was organized as longitudinal panel data. Accordingly, in this kind of further research, it would be beneficial if the data was analysed with the fixed-effects model.

5.3. Concluding remarks

The study about the impact of artist-in-residence programs on the career success of Dutch contemporary artists has revealed novel insights about artist residencies. Out of three success aspects, it was proven that artist residencies have an impact on artistic success, which was mainly determined by participations in biennials. However, the analysis highlights that the impact on commercial success, which was described by participations in art fairs, and Artfacts ranking was not proven, meaning that participation in artist residency programs does not impact these career success determinants. The relationship between residencies and commercial success was not significant in the first stage of the analysis but the impact on Artfacts ranking was not significant in the second stage of the analysis. The results were analysed by employing regression analysis, OLS and 2SLS estimators in particular.

This research will be beneficial for various actors who are involved in artist residency programs. Firstly, host organisations will be able to see the impact of their work, reflect on their programmes and alter the programmes in a way that focuses on the creative and artistic

development of the artist. Secondly, the public institutions, which are responsible for funding artist-in-residence programs will be able to analyse whether the funding, which is devoted to this matter, is spent sufficiently. Lastly, the research will be helpful for artists, who are considering to participate in a residency program to see what kind of impact the residency may have on their career path and success.

The author acknowledges the limitations of this study and hopes for further research activities in this field because artist-in-residence programs indeed are a helpful initiative to help young artists to develop their creative skills and build a professional network that will assist their way to success, either artistic or commercial.

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7. Appendices

Appendix A

Descriptive Statistics of the Residencies group (N=59). Created by the author.

The table consists of descriptive statistics data of the sample group which have a >0 number for the Residencies variable

Variable	0 (No)	1 (Yes)	Mean	Standard Deviation
	Male	Female		
Gender	30 (50.9%)	29 (49.1%)		
Age			37.34	2.84
Education	1 (1.7%)	58 (98.3%)		
Education Dutch	4 (6.8%)	55 (93.2%)		
Education Foreign	40 (67.8%)	19 (32.2%)		
Master's Degree	37 (62.7%)	22 (37.3%)		
Representation	14 (23.7%)	45 (76.3%)		
Representation Dutch	10 (22.2%)	35 (77.8%)		
Residencies			3.37	2.07
Residencies Dutch	12 (20.3%)	47 (79.7%)		
Residencies Foreign	16 (27.1%)	43 (72.9%)		
Age First Residency			28.29	2.82
Solo Shows			7.27	4.48
Solo Institution			2.39	3.35
Solo NonProfit			3.36	2.52
Solo Gallery			4.56	2.64
Solo Before			1.17	2.04
Solo After			3.37	3.39
Group Shows			30.02	14.65
Art Fairs			3.88	3.78
Biennials			1.16	1.38
Publications			5.36	7.42
Media			17.2	23.14
Awards			1.32	1.71
Grants			3.42	1.71
ArtFacts Ranking			38066.9	29380.2

Appendix B

Pearson's Correlations between the main variables (N=86).

	Residencies	*Solo Shows*	*Group Shows*	*Solo NonProfit*	*Solo Institution*	*Solo Gallery*	*Solo Before*	*Solo After*	*Art Fairs*	*Biennials*	*Publications*	*Media*	*Awards*	*Grants*	*ArtFacts Ranking*
Residencies	1.0000														
Solo_Shows	0.2626	1.0000													
Group_Shows	0.1662	**0.6206**	1.0000												
Solo_NonProfit	**0.3516**	**0.7263**	**0.3636**	1.0000											
Solo_Institution	**0.3052**	**0.7017**	**0.4764**	**0.3584**	1.0000										
Solo_Gallery	0.0141	**0.8145**	**0.5585**	**0.3402**	0.3542	1.0000									
Solo_Before	**-0.4179**	**0.3973**	0.2557	0.2220	0.1014	**0.4834**	1.0000								
Solo_After	**0.5709**	**0.3417**	0.2604	**0.3406**	0.2874	0.1989	**-0.3617**	1.0000							
Art_Fairs	–0.1181	0.2053	0.2086	-0.1076	0.2455	**0.3049**	-0.1979	-0.0084	1.0000						
Biennials	0.2556	**0.3426**	**0.4020**	0.1744	**0.3400**	0.2558	0.1665	0.0068	–0.0143	1.0000					
Publications	0.1430	–0.0339	0.0405	-0.0717	0.1168	-0.0788	-0.0849	0.0710	0.0104	0.2000	1.0000				
Media	0.1855	0.0961	0.1871	0.0173	0.1793	0.0418	0.0367	0.1047	0.0757	0.1930	**0.4283**	1.0000			
Awards	0.0382	0.1741	0.1141	0.1375	0.1241	0.1296	-0.0842	-0.0003	–0.0871	0.1626	–0.0624	0.1581	1.0000		
Grants	**0.4150**	–0.0254	–0.0546	0.0877	-0.0296	-0.0981	-0.2315	0.2179	–0.0759	0.2955	**0.3140**	0.1848	–0.0087	1.0000	
Artfacts	**–0.336**	**–0.4372**	**–0.4207**	-0.2482	**-0.3554**	**-0.3217**	-0.0286	**-0.3089**	–0.0675	**–0.4174**	–0.1347	–0.2669	–0.1559	–0.0420	1.0000