

# New data visualizations on the Mechelen export industry and artist migration patterns

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## Abstract

This study is based on a new relational database, Mechelen, a significant, but understudied South Netherlandish art production complex in the early modern period. Large aggregates of Mechelen paintings were produced for export throughout Europe and the Americas between 1540 and 1680. This contribution provides a data driven analysis of first-stop and last-stop artist migration destinations. The new DALMI database includes a reliable count of the aggregate of Mechelen artist numbers (N=1473), their active periods, commercial/dealer networks, migration patterns and destinations that goes beyond anything before attempted. A noticeable migration started as early as 1540. Antwerp emerged as the first stop destination from 1540 to 1700, followed by final destinations (1) Amsterdam, (2) Delft and (3) Brussels. In the second half of the sixteenth century, Mechelen artists began to move to Delft from 1566 until 1613, and to Amsterdam until 1690. Surprisingly, Delft (and not Haarlem or Frankenthal) was chosen by a significant number of so-called water painters (19), who, because they used a water-based medium, could easily be employed in the tapestry industry.

*Keywords:* Art and markets, artist migration patterns, Mechelen art export, data driven research, art data visualization

# New data visualizations on the Mechelen export industry and artist migration patterns\*

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## *Introduction*

As we have discussed elsewhere, Mechelen, and its near-neighbor Antwerp, comprised a formidable, international production complex of paintings in the sixteenth and seventeenth centuries. Mechelen had a production capability consciously directed towards export, which necessitated elaborate strategic planning, both on the production and distribution end. Vertically integrated dealers helped painters to strategically position their products on the low end of the demand curve: paintings were relatively cheap, often not durable by choice (watercolor on linen) and labor time involved was relatively little low. The Antwerp–Mechelen production complex was capable of producing upwards of 10,000–15,000 paintings per year, but the exportable Antwerp surplus as a percentage of total output seems to have declined over the course of the seventeenth century.<sup>1</sup> Note that our re-calibrated 2013 estimates are more modest than those obtained in 2005, when applying Montias’s estimates of productivity for the Dutch Republic to Antwerp.<sup>2</sup> Initially, we added Mechelen via a cautious supplementary estimate based on a low number of artists and our earlier productivity calculations, but new data presented and analyzed here allow us to revise substantially the numbers of Mechelen masters and apprentices, the changes and composition of workshops as well as artist migration patterns for the period 1540–1680.

\* A special word of thanks deserve Filip Vermeylen, for bringing the Mechelen–Dutch immigration question to my attention, Robert Calderbank (Information Initiative @ Duke) for his continuous support to our Duke Art, Law & Markets Initiative (DALMI), Klara Alen for sharing her information on the Antwerp Wauters enterprise with me and Sandra van Ginhoven for organizing and cleaning up the new Mechelen data, normalizing our relational database and designing spectacular Gephi visualizations of the data.

1 N. De Marchi, S. Van Ginhoven and H.J. Van Miegroet, ‘Supply–demand imbalance in the Antwerp paintings markets, 1630–1680’, in: S. Raux and N. De Marchi (eds.), *Moving pictures. Intra-European trade in images, 16th–18th centuries* (SEUH 34), Turnhout 2014, p. 37–76. See especially, *Antwerp’s exportable surplus by sub-period: totals and percentages of output*.

2 N. De Marchi and H. J. Van Miegroet, ‘History of Art Markets’, in: V. Ginsburgh and D. Throsby (eds.), *Handbook on the economics of art and culture*, Amsterdam, London, Tokyo 2005, with reference to older literature.

Table 1 Numerical and percentile breakdown of leavers and stayers in Mechelen from 1540 to 1680

Values	1540-1570	1571-1608	1609-1621	1622-1648	1649-1680
o (Stay)	182	167	133	127	118
i (Go)	31	85	13	12	15
Grand Total	213	252	146	139	133
% Migration	15%	34%	9%	9%	11%

Source: DALMI relational database of Mechelen painters and apprentices for the period 1540-1680 (2015).

### *Bringing large aggregates of Mechelen data together*

For the first time, we have brought together large aggregates of data on Mechelen painters and apprentices for the period 1540 to 1680 in a multi-relational database (N=1473) to such an extent that we now can propose new, and reliable estimates of total production in the aggregate, pricing strategies, labor division, and flexible principal-agent relationships between masters, dealers, journeymen, and apprentices as well as emigration patterns. We cleaned up all the retrieved data, including new archival material, standardized artists names and mapped the physical location of the workshops, established periods of activity, commercial networks, master-apprenticeship relations and so on, and conducted the first in-depth analysis of factual data on multiple and multi-stage immigration patterns of all Mechelen artists active between 1540 to 1680.

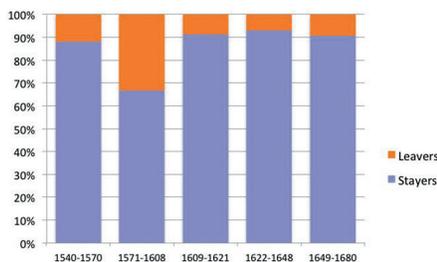
Table 1 illustrates that migration started as early as 1540, a year when Mechelen faced a major economic downturn. A year later, in 1541, the confraternity of painters, which existed since 1479, reorganized itself as a Painter's guild including also 'kleynstekers', or sculptors of statuettes, and eventually masons, goldbeaters, glaziers and jewelers.<sup>3</sup> This strength-in-numbers strategy also coincided with the conscious decision to position their painting production on the low end of the demand curve.<sup>4</sup> From surviving dealer-dealer correspondence, such as that of Chrisostomo Van Immerseel, the Goetkint brothers, Matthys Musson and, most importantly, the Forchondt enterprise, we know that Mechelen linen paintings were relatively cheap and labor time involved was relatively little low, often involving many apprentices.<sup>5</sup> But in spite of the many strategies introduced in Mechelen to facilitate employment and the production of affordable art, there were many artists who were leaving the city between 1540 and 1608.

3 E. Neeffs, *Histoire de la peinture et de la sculpture à Malines*, vol. 1, Ghent 1876, p. 10-11.

4 The Mechelen city magistrates had adopted a similar policy for their textile production to help them transition from expensive to more cost-effective production procedures and cheaper materials. When, in 1566, the city halted their subsidy to the textile sector, it collapsed. See R. van Uytven (ed.), *De geschiedenis van Mechelen. Van heerlijkheid tot stadsgewest*, Tiel 1991, p. 120.

5 S. van Ginhoven, 'The role of the Antwerp painter-dealer Guiliam Forchondt in the large-scale distribution of new imagery in Europe and the Americas in the 17<sup>th</sup> century', PhD dissertation Duke University 2015, based on original archival research in the archives of Antwerp, Seville (Spain), Mexico City, Puebla and Guadalajara (Mexico) and Lima (Peru) and with updated references to older art dealer literature, among others.

Graph 1 100% Stacked bars of aggregate Mechelen artists who leave or stay between 1540 and 1680



Source: DALMI relational database of Mechelen painters and apprentices for the period 1540-1680 (2015).

reliable data available on the journeymen. What emerges clearly from our data is that the migration stream tapers off from 1609 onwards (9 per cent), only to pick up slightly again from 1649 onward (11 per cent), as shown in Graph 1. Most likely, the implementation of the Twelve Years' Truce may have been one of the motivating factors to slow down immigration. In the same period of truce and recovery, we also notice a surge in the critical mass of Mechelen painters and most importantly, a surge in apprentices. This increase underscores that the profession of painter was perceived as one with a future in Mechelen, an extra incentive to stay there. That the painting profession was perceived as one with a future is particularly intriguing given the economic contraction and demographic recession.

### *Migration patterns and destinations*

A detailed analysis of all the (im)migration stops, duration and all final European destinations for all the masters migrating between 1540 and 1680 (Graph 2), allows for some new, factual observations. As far as significant migration patterns are concerned between 1540 and 1608, (1) Antwerp is always the first stop, followed by final destinations (2) Amsterdam, (3) Delft and (4) Brussels. In the first (1540-1570) of the five phases, the Antwerp-Amsterdam-Delft-Brussels pattern is quite distinct, followed by a more modest immigration flow to Cologne and Italy. This migration took place before the religious troubles hit Mechelen, which seems to suggest that the migration between 1540 and 1560 was not solely religious, but also economically motivated.<sup>7</sup>

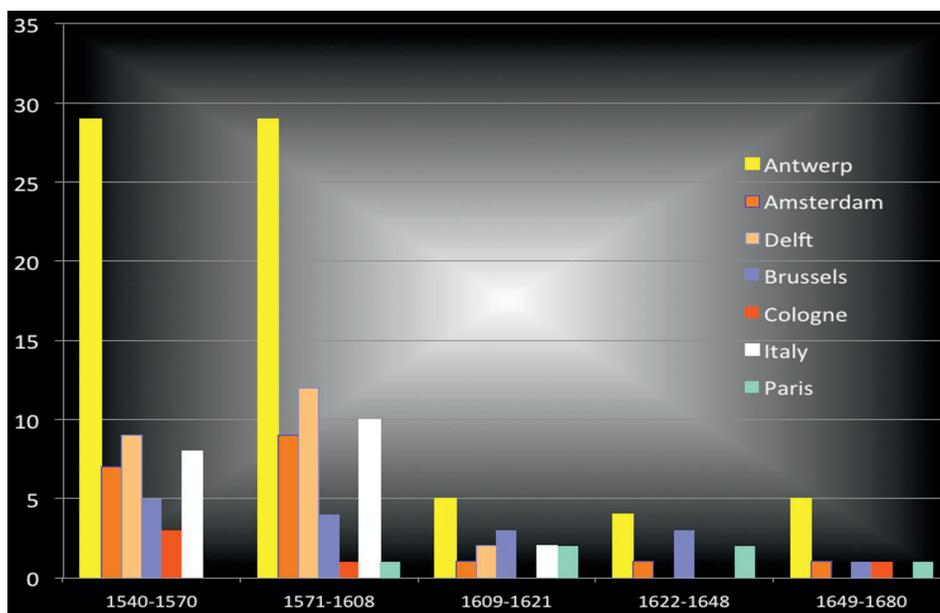
A similar pattern emerges for the period 1571-1608 (Graph 2), but here economic and (im)migration for religious motivations were likely intertwined. From our database,

6 J. Briels, *De Zuid-Nederlandse immigratie 1572-1630*, Haarlem 1978, p. 8.

7 Mechelen's building industry had de facto collapsed in 1540, causing massive unemployment in that sector, leaving many workers basically two solutions: emigrate or change profession. See Van Uytven, *De geschiedenis van Mechelen*, p. 121.

An expected migration peak is observable between 1571 and 1608, when at least 85 of the 252 active masters leave the economically contracting city, which represents roughly 34 per cent of the total aggregate of masters in that period. When comparing this number against Briels' estimates of ca. 236 artists moving north between 1580 and 1595, the total Mechelen artist immigration in this period represents a significant part of this estimate.<sup>6</sup> At this point, we still need to finalize our research of the movement patterns of journeymen and apprentices, though in this particular instance there is little to no

Graph 2 (Im)migration destination for Mechelen artists between 1540 and 1680



Source: DALMI relational database of Mechelen painters and apprentices for the period 1540-1680 (2015).

we also observed that the Mechelen painters used networks that existed since the 1540s. Haarlem, for instance, is not among the chosen destinations, in spite of the fact that the Hals family had moved to Haarlem from Mechelen via Antwerp. In fact, Haarlem was not a particularly attractive place for artists in the period of the major Mechelen migrations.<sup>8</sup> But around 1605, Haarlem expanded to about 30,000 inhabitants of whom at least 44 were *kunstschilders* in 1622 and their number was steadily growing.<sup>9</sup> A two or three-step migration strategy via Antwerp, Bergen-op-Zoom and Dordrecht/Rotterdam to Amsterdam was more typical.<sup>10</sup>

The very distinct choice of Delft, which emerged from our data as a preferred final destination, is related to the fact that many *waterschilders* could easily find employment in the tapestry industry as cartoon painters and designers, among other options.<sup>11</sup> At

<sup>8</sup> M.E.W. Goosens, 'Schilders en de markt Haarlem 1605-1635', PhD dissertation Leiden University 2001, p. 44.

<sup>9</sup> Goosens, *Schilders en de markt Haarlem*, p. 24-27.

<sup>10</sup> A representative example is that of the Bol clan, which migrated from Mechelen to Amsterdam. Hans Bol moved to Antwerp in 1572, then to Bergen-op-Zoom in 1584, followed by his migration to Dordrecht in 1586 and to Amsterdam the same year. Jacques I, Jacques II and Pieter Bol followed the tested Dordrecht route in 1579 to arrive in Amsterdam in 1589.

<sup>11</sup> J.M. Montias, 'Painters in Delft, 1613-1680', in: *Simiolus*, 10.2 (1978-79), p. 84-114; Idem, *Artists and artisans in Delft. A socio-economic study of the seventeenth century*, Princeton 1982.

least 19 master painters migrated to Delft between 1566 and 1613, not counting their journeymen, apprentices, family and professional entourage.<sup>12</sup> Their activities in Delft must have affected the artistic production there, especially since there was a chronic shortage in cartoon painters.<sup>13</sup> For example, the water painters Hans Verlinden, active in Mechelen between 1569 and 1581, migrated in 1581 via Rotterdam to Delft, followed later by Elias and Franchoy Verhulst, who migrated to Delft in 1601. They both worked as tapestry designers for the tapestry entrepreneur Franchoy Spierinckx, who had emigrated from Antwerp in 1598 and had set up shop in Delft, where he was the sole producer of wall-sized tapestries.<sup>14</sup>

After 1613, Delft is no longer a destination and a limited number of artists resettle in Amsterdam, Antwerp or Brussels (Graphs 3 and 4). Brussels remained a destiny for Mechelen water painters throughout the seventeenth century, where they also could find employ in the tapestry industry as designers and cartoon designers.<sup>15</sup>

Immigration outside the Netherlands remained very modest throughout the seventeenth century: Cologne was no longer a destination of choice and only Paris remained somewhat attractive until 1680. Note that the Mechelen–Paris connection has a well-established pedigree going back to the sixteenth century.<sup>16</sup>

**12** The migration from Mechelen to Delft started in 1566 with Pieter Ghysbrecht Vlam; 1580 with Michiel Hack; in 1584 Jan van der Schooten; in 1585 Jan van Tielt (first in Antwerp in 1564); in 1587 Louwereys Verhaeghen and Hendrick Thys; in 1590 Jan van der Burch, August van Pastenaken, Corneel van Pastenaken and Adriaen d'Hondecoeter; in 1591 Jacques van de Weyer; in 1594 Adriaen Arent; in 1601 Servaes, Elias Verhulst and Franchoy Verhulst (first in Antwerp in 1586); in 1601 Hans d'Hondecoeter; in 1605 Hans Verlinden (first in Rotterdam in 1581); in 1612 Pieter Matthys; and finally, in 1613 Corneel van Pastenaken. All data available in DALMI database 2014, stable URL: <http://www.dukedalmi.org>.

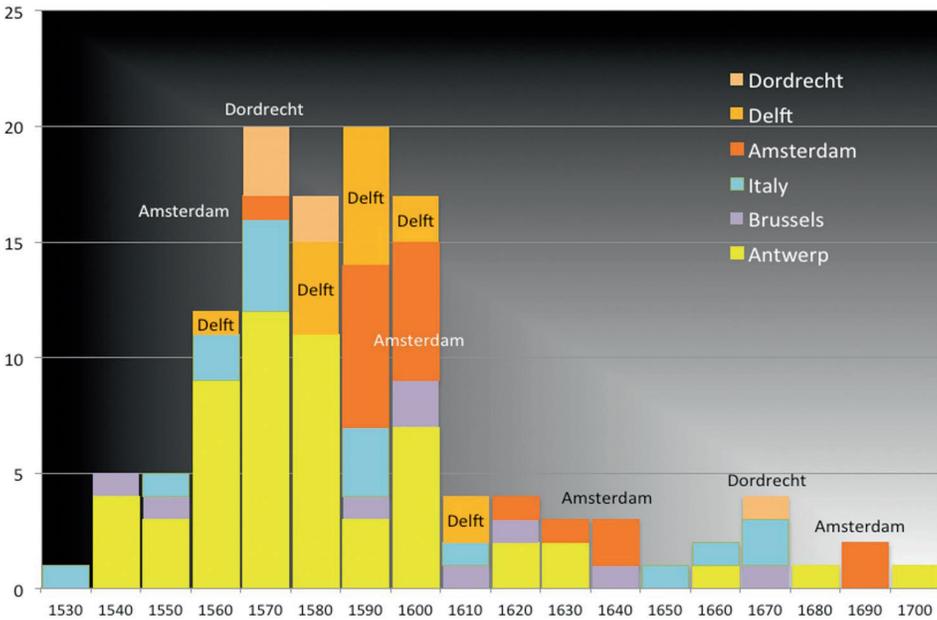
**13** Montias *Artists and artisans*, p. 290.

**14** W.A. Liedtke, M.C. Plomp and A. Rüger, *Vermeer and the Delft school*, New York 2001, with contributions by R. Baarsen, M.J. Bok, J.D. van Dam, J.D. Draper, E. Hartkamp-Jonxis, and K. Kaldenbach, p. 27. Also see Montias, *Artists and artisans*, p. 287.

**15** Klara Alen made me critically aware and provided me with documentary evidence that Mechelen water painters were also seeking employ as cartoon painters for the tapestry industry in Antwerp (Maria-Anna Wauters), which seems to corroborate that Mechelen painters went to Delft and Brussels for similar job opportunities in the tapestry industry. Also see E. Duverger, *Documenten betreffende de Antwerpse tapijthandelaar Cornelis de Wael, erfgenaam van de firma Wauters, 1695-1741*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunst 2008, vol. 1, p. 166-167; K. Brosens and V. De Laet, 'Matthijs Roelands, Joris Leemans and Lanceloot Lefebure unearthed. New data on Brussels baroque tapestry', in: *The Burlington Magazine* 151 (2009), p. 360-367.

**16** Jacob De Backer was mentioned in Van Mander's *Schilderboek* of 1604 (fol. 231v-232r) as a very productive painter who first worked for Anthonis de Palermo, an international art dealer from Mechelen, before he joined forces with Hendrick van Steenwyck (fol. 231v36; also Lutheran), who emigrated to Frankfurt where he became a citizen together with his father-in-law, Marten van Valckenborgh (1534/35-1612) in 1586. See H. Miedema (ed.), *Karel van Mander. The lives of the illustrious Netherlandish and German painters*, 6 vols., Doornspijk 1994, vol. 4, p. 204-5. Van Mander specified that De Palermo made great profit with the sales of De Backer's imagery, especially in '[...] France where they sold very well [...]' and that 'his works are very sought after and wanted everywhere and enrich the cabinets and galleries of art lovers in many places.' Also see L. Huet, 'Jacob de Backer', in: *Fiamminghi a Roma. 1508-1608. Kunstenaars uit de Nederlanden en het Prinsbisdom Luik te Rome tijdens de Renaissance*, exh.cat., Brussels 1995, p. 68-69.

Graph 3 First-stop (im)migration destination for Mechelen artists between 1540 and 1680



Source: DALMI relational database of Mechelen painters and apprentices for the period 1540-1680 (2015).

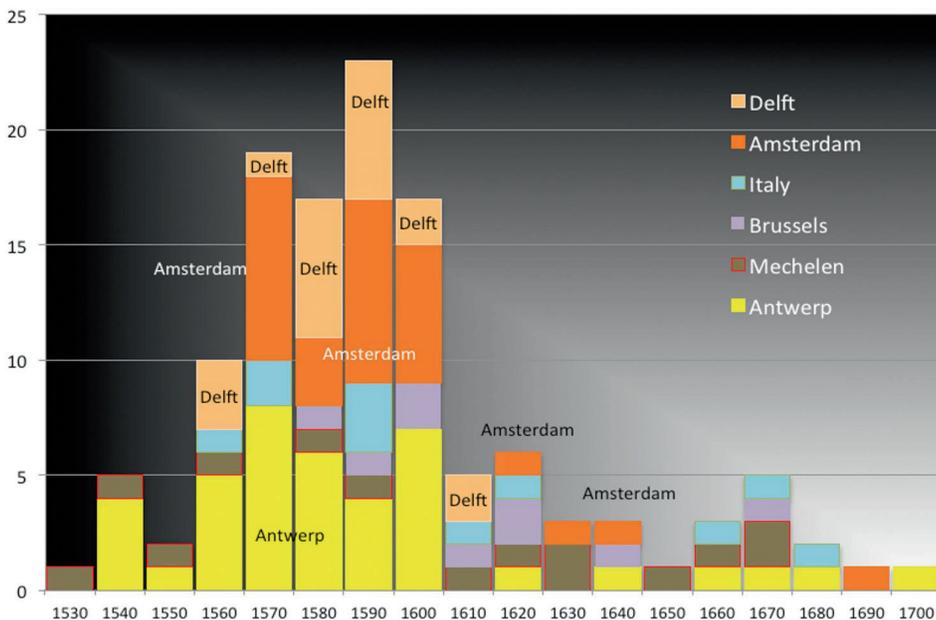
### *First stop – last stop (im)migration patterns*

To place the observed new migration patterns with a more precise demographic context, it is well known that the size of the Mechelen population in 1530 is estimated at about 24,000–28,000 inhabitants; in 1544 estimated at 25,000–30,000 and in 1585–1594, it fell back to an estimated 11,000. After this serious demographic contraction, the Mechelen population stabilized at about 15,000 inhabitants in the beginning of the seventeenth century, remounting by the mid seventeenth-century to about 20,000 and between 1675 and 1684, to around 24,000.<sup>17</sup>

In the early seventeenth century, we also observe that Antwerp as major first stop destination disappeared, only to take up slightly after 1620, 1660 and 1680. Both first-stop and last-stop visualization show that most immigrations took place before 1600. In the period 1560–1613, Amsterdam, Delft and Dordrecht stand out as prime and final destinations (Graphs 3 and 4). After 1613, the migration to Delft is no longer observable from our data, both in our first-stop and last-stop scenarios (Graphs 4 and 5). Though Antwerp had been a very attractive first/last-stop destination throughout the sixteenth century, it had lost its attraction as a last-stop migration destination after 1610. Many

<sup>17</sup> E. Meel, M. Carlier and L. Janssen, 'Mechelen in de lange 17de eeuw, 1585-1715, een eenzaam bestaan zonder uitschieters', in: Van Uytven, *De geschiedenis van Mechelen* (n. 4), p. 119, 149-151.

Graph 4 Last-stop (im)migration destination for Mechelen artists between 1540 and 1680



Source: DALMI relational database of Mechelen painters and apprentices for the period 1540–1680 (2015).

artists, such as Crispijn van den Broecke moved first to Antwerp, prior to resettling in Middelburg (Zeeland) in 1585 (fig. 1).<sup>18</sup>

In the seventeenth century, Amsterdam still attracted sporadically Mechelen emigrés until 1690. Between 1609 and 1680 the (im)migration patterns are modest and only between 13 to 15 masters leave Mechelen per time period, never exceeding 11 per cent of the total aggregate of painters (Table 1). Also remarkable is that from 1530 to 1680, a small contingent of artists actually returned back to Mechelen to set up shop again there (Graph 4).

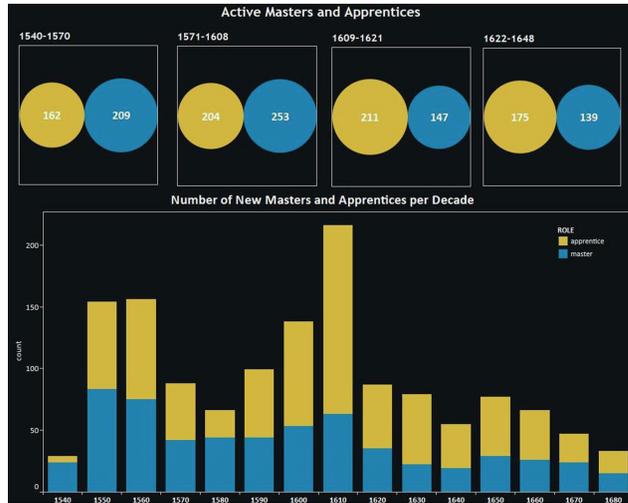
#### *Enhanced production capability and economies of scale*

As mentioned earlier, Mechelen was the first instance of a production capability consciously established to export paintings on a large scale throughout the sixteenth and seventeenth centuries. Such combined capacity necessitated elaborate strategic planning, both on the production end (workshop practices that involve many apprentices) and distribution/logistics. Surviving dealer-dealer correspondence, which we have discussed elsewhere, reveals that they were often operating in a particularly aggressive manner.<sup>19</sup>

<sup>18</sup> DALMI database 2015 (stable URL: <http://www.dukedalmi.org>).

<sup>19</sup> N. De Marchi and H.J. Van Miegroet, 'Exploring markets for Netherlandish paintings in Spain and Nueva España', in: R. Falkenburg et al., (eds.), *Kunst Voor de markt – Art for the market 1500–1700*.

Graph 5 Active masters and apprentices over the period 1640-1648 and number of new masters and apprentices per decade



Source: DALMI relational database of Mechelen painters and apprentices for the period 1540-1680 (2015).

Though Mechelen was experimenting with new production techniques, outlets and sales platforms throughout the sixteenth century (painting exhibitions, auctions, lotteries), vertically integrated dealers were continuously exploring new markets to answer to chronic over-production of paintings and slowing (or nearly non-existing) local demand throughout the seventeenth century.<sup>20</sup> Even in the periods of economic and demographic contraction period, Mechelen painters seemed to have maintained their production capabilities (Graph 5) and consciously favored quantity over quality. Paintings were relatively cheap, often not durable by choice (linen paintings with 'build in' expiration date) and labor time involved was relatively little. A critical element of this strategy was the share of apprentices in this production process.

One of the most surprising discoveries in our data analyses of masters and apprentices over the period 1540 to 1680 is that the number of apprentices goes up in the early seventeenth century from 204 to 211 (Graph 5). This rise in the total number of apprentices occurred at a moment when Mechelen, like Antwerp, had not yet recovered from a significant migration, a dramatic demographic downturn and a severe economic contraction.<sup>21</sup> Our data show that the number of workshops shrunk from 253 (1571-1608) to 147 (1609-1621), but this should not be interpreted as a diminishing

*Nederlands Kunsthistorisch Jaarboek* (1999), p. 81-111, and S. van Ginhoven, 'Guilliam Forchondt and the role of the Greater Netherlands in the dissemination of Flemish Art in Latin America', in this issue.

<sup>20</sup> N. De Marchi and H.J. Van Miegroet 'The Antwerp-Mechelen production and export complex', in: M. Mochizuki, A. Golahny and L. Vergara (eds.), *Essays in memory of John Michael Montias*, Amsterdam 2007, p. 133.

<sup>21</sup> Van Uytven, *De geschiedenis van Mechelen*, p. 149-151.



Fig. 1 Crispijn Van den Broecke, Portrait of two young men, Cambridge MA, Fitzwilliam Museum.

of overall production capability. Quite the contrary is true. What we witness here, and the trend continues in 1622–1648, is economies of scale where paintings were produced faster and cheaper. The appearance of less, but numerically larger workshops where the proportional balance between apprentices and masters has shifted in the direction of the apprentices allowed Mechelen to maintain a relatively high production output at a lower labor cost point, since less expensive apprentices were part of the process (Graph 5).

The simple meaning of the Mechelen economies of scale approach is that producing paintings was done more efficiently with increasing the size of the workshops, adding more apprentices and boosting the speed of operation. Apprentices could be expected to produce acceptable work of the desired sort more cheaply than their masters. Such economies of scale allowed the workshops to lower capital per unit of production as their design capacity and output increased to meet the orders for competitively priced paintings for export throughout Europe and the Americas. Finally, an added benefit of the visualized data in Graph 5 is corroboration of Karel Van Mander's statement that in the life of Hans Bol there were 150 ateliers in Mechelen.<sup>22</sup> It is herewith proven factually correct and his assessment was actually slightly underestimated.

### *New production and marketing techniques*

As we have seen, by employing less masters and more apprentices, Mechelen presented several unique, cost-saving solutions in their production and marketing of paintings until 1680 that were not adopted on this scale in the Dutch Republic. The Mechelen collective strategy resulted in the sustained production of large quantities of paintings that were more competitively priced in foreign markets because they relied in a significant part on the cheap labor of apprentices (Graph 5). For instance, an underground production circuit of clandestine workshops ran by apprentices appeared in the early seventeenth century, which indicates that demand for Mechelen *watervverfdoeken* was substantial. These 'rogue apprentice workshops' were operating at night (which was against the law). This

<sup>22</sup> A. Monballieu, 'Documenten van het Mechels schilders- en beeldsnijdersambacht, II. Het rekwest van 1562 en het probleem van de 51 of 150 ateliers', in: *Handelingen van de Koninklijke Kring voor Oudheidkunde, Letteren en Kunst van Mechelen* 75 (1971), p. 74, citing M. van Vaernewijck, *Den Spiegel der nederlantscher audheyt*, Ghent 1568, fol. 135v–136r. Autenboer also notes that Karel van Mander later also used the number 150, though whether this was Van Mander's own independent count at that time or a repetition of Van Vaernewijck's observation is difficult to say.

considerably eased labor cost pressures – and price – but adversely affected the relation between the apprentices (211 in the period 1609–1621) and their improvised workshops and the more established, larger ones headed by established masters. A conflict ensued and grew to such proportions that by the end of the second decade, no less than 96 masters (of the 147 in operation between 1609 and 1621) signed a petition to stop these illegal workshop practices.<sup>23</sup> Their request was granted by the city magistrates, who even allowed the guild to conduct legal searches and seizures of the ‘illegal’ workshops.

Not only the apprentices, but also the masters needed to be creative and resilient in seventeenth-century Mechelen. Migration had always been an option, but unemployed masters were often employed as journeymen in Antwerp, one of the first migration stops (Graph 3).<sup>24</sup> For the artists who preferred not to leave Mechelen, subcontracting became an integral part of their labor and artistic practice. Full fledged masters were hiring each other to producing paintings on a contractual, two-to-three-year basis, with notarized agreements that stipulated subject matter, production quotas, and pre-determined wages. Such arrangements were not confined to unknown journeymen or cash-strapped younger masters ready to leave the city. We find several reputed masters entering in such binding agreements, choosing steady employment over the uncertainty of producing and selling their own paintings. Several large workshops, such as that of Gillis Nijns, for instance, contracted young artists to paint cheaper *watervelf* copies after more reputed Mechelen painters, which were bought in large quantities by international dealers, such as the Forchondt, Musson or the Van Immerseel enterprises and many send printed lists of the Mechelen paintings they acquired to Paris, Amsterdam, The Hague, Delft and Rotterdam.<sup>25</sup>

### *Some concluding thoughts*

Despite the remaining uncertainty about the Mechelen artistic production, we now have, for the first time, a reliable count of the aggregate of Mechelen artist numbers

**23** De Marchi and Van Miegroet, ‘The Antwerp–Mechelen production and export complex’, p. 133–147, with reference to older literature.

**24** In a sworn declaration of 30 July 1608, Rombout Van Avont, master painter in Mechelen, testifies that he had to work in Antwerp ‘in knaepschap’ (as an apprentice) to make ends meet. See Montballeu, ‘Documenten van het Mechels schilders- en beeldsnijdersambacht’, p. 172–173.

**25** Van Immerseel worked predominantly with the Mechelen workshops of Gillis Nijns and Cornelis Steenbanck; Musson with Cornelis Beerinckx, Jan de Coster, Lucas Floquet, Pauwels Floquet, Simon Floquet, Hans Goetgebuer, Jasper Hemelaer (considered as one of the best water painters), Nicolaes Ponsaert, Jan Royter, Karel Toussaint, Gilliaem Stevens, Jan Verhuyck, Jan Verpoorten, and Jan Verschueren, while the Forchondt enterprise did large-scale business with Jasper Hemelaer, Bartholomeus Clerens, Marck Couthals, Goetgebuer, Adriaen Matheussens, Matheus Matheussens, Frans de Leeuw, Gillis Nijns, Philips de Reyger, Matthijs de Reyger, Cornelis Steenbanck, Gilliam Stevens, Nicolaes Stusaet, Jan Verschueren, Geeraert Verschueren, Jan Verhuyck, Michiel Verhuyck, and Jan Verpoorten, to name only the most important ones (DALMI database 2014). Forchondt exported on average 410 paintings and drawings per year between 1644 and 1671, and Musson–Fourmenois 324 in their most active period, 1655 to 1668.

(N=1473), their active periods, commercial networks and migration patterns and destinations that goes beyond anything before attempted for our period (1540 to 1680). We were also able to contextualize these data within our own research interests, which tend more towards the variety of creative ways in which Mechelen paintings were produced for export and marketed, though we still need a serious micro-economic analysis of art labor market in Mechelen for the period 1540–1680. We also need a closer study of these data to present new, and reliable estimates of total artistic production, pricing strategies, labor division, and wage differentials between masters, journeymen, and apprentices, but this is outside the scope of this article. And, finally, we need to recover some of the art produced in Mechelen, for little or nothing has been preserved from the estimated art production. There is a story of erasure and absence, which explains some of the scholarly neglect of Mechelen painting and its history, especially the large-scale *watervelf* production for export.

To address more specifically the theme of this issue, we have focused on the analysis of first-stop and last-stop artist migration destinations, which has revealed that a noticeable migration started as early as 1540, quite likely motivated by economic concerns. Antwerp emerged as the first stop destination from 1540 to 1700, followed by final destinations (1) Amsterdam, (2) Delft and (3) Brussels. In the second half of the sixteenth century, Mechelen artists began to move to Delft from 1566 until 1613, and to Amsterdam until 1690. These were prime destinations, whereas there is no significant migration to Haarlem, which in light of the often mentioned Hals–Mechelen–Haarlem connection we had expected. A similar remark applies to Leiden, Middelburg, Utrecht or Frankenthal.

Delft was chosen by a significant number of water painters (19), who, because they used a water-based medium, could easily be employed in the tapestry industry, especially, since there was a well-documented shortage of cartoon painters, which, in turn, created a bottleneck for the weavers.<sup>26</sup> Our data, sadly, do not reveal how the presence of the Mechelen painters affected in detail the artistic production in Delft, but this warrants further investigation. Along the same lines, the lure of the tapestry manufacture accounted for migration to Brussels, which started at 1580 and lasted until 1670. But in spite of the many observed (im)migration of artists, there remained a significant critical mass of painters in Mechelen until 1700, producing large quantities of art for export throughout Europe, predominantly to Spain but also including the Northern Netherlands, and to the Americas. Finally, this research has again demonstrated that new knowledge can be gained from studying Mechelen art and artists in the aggregate, while paying attention to relatively large aggregates of data to study the causal relationship between socio-economic issues, demographic circumstances and artistic production and migration.

<sup>26</sup> This is particularly true for Franchoy Spierinckx and the shortage of cartoon painters. According to Montias, this ‘helps explain why so many of the tapestries produced in Delft were “repeats” for which existing cartoons could be reutilized’; see Montias, *Artists and artisans* (n. 11), p. 290–291.