

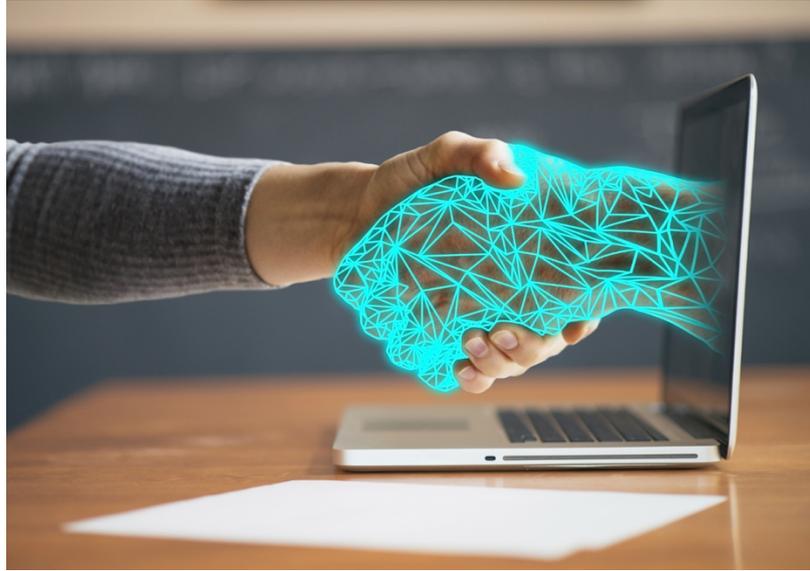


THE UNIVERSITY
of EDINBURGH



Data-Driven
Innovation

Building Back Better, Data-Driven Innovation and the Scottish Football Industry¹



Micro Briefing: Scottish Women's Football

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¹ We are grateful for the support and co-operation given to this study from the four football clubs that participated in the study (Aberdeen, Heart of Midlothian, Hibernian and Motherwell) and Scottish Football Association.

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This report focuses on Pillar 1 of the SFA 2021-25 Strategy: Accelerate the Growth of Girls' and Women's Football

Enabler	Summary of Current State of Play	Key Recommendations
<p>A - A Culture of Inclusivity, Safety and Wellbeing <i>"We want to reinforce the mental as well as physical benefits of the national game and demonstrate that football is safe and open to all, with no boundaries nor limitations. Our game embraces all cultures and thrives on the input of diverse skills and backgrounds."</i></p>	<ul style="list-style-type: none"> The lack of fans during the Covid-19 pandemic has negatively impacted SWPL teams' growth (31) 	<ul style="list-style-type: none"> Collaborate online communications and support from corresponding SPL clubs to boost the profiles of SWPL clubs that have lacked prior support from the men's team (15) Work with key members of the online community to foster inclusivity and community (53)
<p>B - Diverse and High-Performing People <i>"We want the best for the people that make football happen. We will invest in the personal and professional development of our workforce and ensure that football is reflective of Scotland's society from the boardroom to the dressing room."</i></p>	<ul style="list-style-type: none"> Increasing funding and professionalisation are already showing benefits for the national team (29) Participation in girls' football is growing in 2021, even with the pandemic (37) 	<ul style="list-style-type: none"> Ensure opportunities for foreign players in SWPL teams to support growing international engagement (29, 54)
<p>C - Data-led Decision Making <i>"The Scottish FA is almost 150 years old but embraces the challenge to evolve and find relevance among new audiences. Our decisions will be data-led and use insight to find innovative ways of improving the game."</i></p>	<ul style="list-style-type: none"> Social media sentiment tracking gives key insight into the thoughts and feelings of SWPL clubs' fans (38) Social media tracking identifies key influencers around each club (40) Large volumes of neutral sentiment online imply that fans are still mainly engaging with information online, rather than generating emotional conversations (45) 	<ul style="list-style-type: none"> Work with key influencers to increase and improve SWPL clubs' engagement with current and new fans (40, 51, 53) There are league-wide opportunities to share resources and boost the SWPL's reputation/popularity, especially with a Scottish Football/ Sport Data Laboratory (56, 57)
<p>D - Effective Project Delivery <i>"We have an extensive to-do list at all times but the Goals enable us to give greater focus to the projects that really matter. To achieve our ambitions, we will work efficiently and effectively as an organisation and with relevant partners."</i></p>	<ul style="list-style-type: none"> Despite historic league success, Glasgow City have been overtaken by Celtic and Rangers in terms of online conversations (32, 33, 45) 	<ul style="list-style-type: none"> Focus league resources on boosting communications around Glasgow City to promote equity in the league (45). Work with key influencers to greatly expedite this process (53)
<p>E - Commercial Growth <i>"To grow we must invest and that requires commercial innovation. We will showcase the Power of Football to partners and sponsors and make them part of a compelling journey."</i></p>	<ul style="list-style-type: none"> Interest in SWPL is growing, with the gap in levels of emotional engagement between SPL and SWPL small and shrinking, particularly in the off-season (14, 42) SWPL teams experience a sharp drop in online engagement following the end of the season (17) The most professionalised clubs not only have the best league performance, but also the largest online following, with a large gulf between the top four clubs and the rest of the SWPL. This is especially true for clubs with strong men's team links, i.e., Rangers and Celtic (18, 29, 34, 44, 46) 	<ul style="list-style-type: none"> Engage with fans year-round to strengthen fan relations and generate self-sustaining fan communities, particularly with boosts from SPL clubs (17, 46, 52) Increase integration between corresponding SPL and SWPL clubs to increase engagement (15) Invest in professionalisation across all SWPL and SWPL2 clubs (18) Promote higher online presence to make the women's game more accessible for the fluid fan (48)
<p>F - Best Practice Governance <i>"We will lead the game with transparency and integrity, ensuring our processes and systems remain robust and reviewed in line with the highest standards of modern governance."</i></p>	<ul style="list-style-type: none"> Professionalisation is growing and leads to clear benefits for clubs and the national team (29, 34) 	<ul style="list-style-type: none"> Share resources between corresponding SPL and SWPL clubs to increase efficiencies in generating awareness (15) Collaborate on social media efforts across SPL and SWPL clubs to lead to a larger, more connected community (16)

*Introduction*³

1. Football is Scotland's most popular sport. It delivers in communities and connects with those on the margins of society on a scale that other sports fail to match. Football clubs are anchor institutions within Scottish communities. They do not exist in isolation from the broader forces that affect the people, communities, and countries in which they are situated- including the Covid-19 pandemic.
2. Scottish football's reach and impact extend far beyond what is immediately obvious both in direct and indirect economic and societal terms. As one club director pointed out, football clubs are at the heart of their local communities and fund thousands of supplier businesses across Scotland, which in turn secures employment for tens of thousands of people⁴.
3. In the words of the Chair of Scotland's Sustainable Growth Commission, 'I can think of no other business, institution or organisation with the communication reach of football. Every week, it dominates swathes of broadcast media, social media, and crucially, public discussion⁵.
4. This series of micro briefings on the Scottish Football Industry have resulted from a Scottish Funding Council funded Data-Driven Innovation Initiative as part of the '[Building Back Better](#)' open funding call, helping to transform the City region into the data capital of Europe. The Scottish Funding Council has provided £75m funding to boost the Scottish university research, to contribute to the mitigation of effects of Covid-19 pandemic. The University of Edinburgh received £23.2m of these funds.
5. The data-driven approach to Covid-19 recovery and job retention in the Scottish football industry project was led by the University of Edinburgh's Academy of Sport⁶ in partnership with the Bayes Centre⁷.
6. The project was designed to (i) produce unique data sets that could help the Scottish football industry build back better from Covid-19 and (ii) demonstrate the potential of the University of Edinburgh's capability to inform and support both the football industry and the broader sports industry.
7. The project consisted of three sets of data-driven activities: (i) an analysis of Scottish football sentiment and networks, generated through online communications; (ii) a spatial and demographic analysis of supporters and non-supporters; and (iii) a cataloguing of a Scottish football data set.
8. This micro briefing focuses upon a specific data-driven sentiment and network analysis of Scottish women's football.

³ Project Team: Jake Barrett, Ellen Frank Delgado, Grant Jarvie, Neil Mason, Neil McGillivray, Mason Robbins, Michael Rovatsos, John Scott, Paul Widdop.

⁴ Wilson, A. (2020). Football must be the foundation stone as we rebuild. Nutmeg No 18: December 2020, p17.

⁵ Wilson, A. (2020). Football must be the foundation stone as we rebuild. Nutmeg No 18: December 2020, p17.

⁶ [University of Edinburgh Academy of Sport](#)

⁷ [University of Edinburgh Bayes Centre](#)

9. The new Scottish Football Association (SFA) 2021-2025 strategy specifically states that Scottish football decisions will be data led and that innovative ways of improving the game will be embraced. We recognise that new skills, data-driven innovation can help understand behaviours and what fans want and care about.
10. The SFA Accelerate Our Game Strategy 2021-2025 recognises that women's football is the biggest growth area in our national game⁸.
11. This specific micro briefing focuses upon a sentiment and network analysis towards Scottish women's football. The data analysis presented here covers a 12-week period from 08/04 (Week 5 of the broader study) to 30/06 (Week 16 of the broader study).
12. The scope of analysis is drawn from aspects of social media analysis of Scottish women's football involving the following the Scottish Women's Premier League (SWPL) clubs: Glasgow Rangers, Glasgow City, Glasgow Celtic, Hibernian, Spartans, Forfar Farmington, Motherwell, and Heart of Midlothian.

Key Findings from the Data Analysis

13. Over the period of analysis, social media Twitter engagement with SWPL increased rapidly, peaking in Week 13 with the last game of the season.
14. When comparing SWPL (women's league) with SPL (men's league), a gap remains between the levels of emotional engagement with SPL and SWPL clubs, but this gap is small, particularly during the season.
15. Not all SWPL clubs have men's and women's teams within the same club set up. Where this exists, there is potential for SWPL clubs to integrate to continue to drive engagement with football fans and cross-club communities. While some of the men's clubs have supported their counterparts, there is room for growth in the way that men's clubs support women's clubs within the same club set up, to communicate, and support old and new fans through club loyalty.
16. Social media links between SPL and SWPL clubs can be leveraged to foster a larger online community engagement overall.
17. SWPL clubs should work harder with post-season engagement with fans as a way of fostering stronger relationships with the team. All clubs, including the top four most active, were susceptible to major drops in end of season engagement. This indicates that SWPL clubs are not self-sustaining engagement levels post-season.
18. The four clubs that generated the highest levels of engagement were Rangers, Celtic, Glasgow City, and Hibernian.

⁸ Accelerate our game 2021-2025: Scottish Football Association strategy for girls' and women's football-
<https://www.scottishfa.co.uk/media/8054/accelerate-our-game-pdf.pdf>

Benchmarking, Data and Women's Football

19. An increasing number of international reports have evidenced the significant growth in women's football globally. There has been a growing interest not just from sponsors, but fans, stakeholders, broadcasters, professional football clubs, and historically men's football clubs- all of which has helped to provide for a better-informed understanding of the current landscape of women's elite football including leagues, clubs and players⁹.
20. The 2019 CIES demographic analysis of the five major women's football leagues in the world concluded that the economic development and professionalisation of the women's game was leading to several processes already observed in the men's game¹⁰. It revealed that the age of players was increasing, international mobility was growing, and the best footballers were increasingly concentrated within a limited number of clubs, independently of their origin.
21. A further trend observed in professional club women's football was the growth of an expatriate presence. The total number of expatriates in the leagues covered increases year by year: from 300 in 2017, to 348 in 2018, and to 379 in 2019. The internationalisation of the labour market already observed in the men's game is also taking place in the women's professional game. In 2019, in total, 53 associations have expatriates in the leagues studied (+6 with respect to 2017, +3 in comparison to 2018).
22. Canada was the country with the biggest contingent of expatriate players in the championships analysed, with a total of 28. Canadians are particularly numerous in the United States within the NWSL. Many Scottish women head for England, while half of female expatriate Americans play in the Swedish Damallsvenskan.
23. The CIES analysis on trends revealed the economic development occurring at the top of the pyramid of women's professional football. It noted the need to reflect further on regulatory mechanisms to limit any negative effects due to market logics that had already been observed in the men's game. This includes, among others, the speculation on young players, the concentration of resources, and competitive imbalance.
24. The FIFA benchmarking report on women's football (2021) reported several key findings¹¹. These were: (i) for leagues in which 80% or more participating clubs have a girls' youth structure, the average national-team ranking is 13, compared to a ranking of 28 for all other leagues; (ii) leagues with both a club licensing system and financial controls have a higher proportion of clubs that are profitable or break even (36% v. 32%) and a higher average club revenue (USD 0.9m v. USD 0.3m); (iii) in 65% of

⁹ FIFA (2021). Setting the pace: FIFA Benchmarking report women's football provides one of the most detailed overviews of women's football in the world. The evidence base largely draws upon the FIFA Deloitte analysis of women's football. The 36th CIES Football Observatory Monthly Report evidences the demographic features of clubs in women's football leagues. The report analyses the composition of squads in five of the world's most developed competitions: four European (Germany, Sweden, France and England), as well as the Women's National Soccer League in the United States.

¹⁰ CIES (2019). Demographic analysis of the five major women's football leagues. See <https://football-observatory.com/Demographic-analysis-of-the-five-major-women-s->

¹¹ FIFA (2021). Setting the pace-FIFA benchmarking report on women's football- See <https://digitalhub.fifa.com/m/3ba9d61ede0a9ee4/original/dzm2o61buenfox51qjot-pdf.pdf>

leagues surveyed, teams with the highest qualified coaches outperformed other teams, underlining the importance of coach education and development in the women's game; (iv) clubs with better access to a higher number of and quality of facilities outperform other clubs in their league: 50% of teams with access to a set standard of higher number and quality facilities were league champions in the last five years, compared with only 23% for all other clubs; (v) broadcasting women's football on traditional and digital platforms represents a significant growth opportunity with broadcast income currently accounting for an average of 6% of revenue for clubs and 18% of revenue for leagues that were surveyed; (vi) teams offering a season ticket had higher average league attendances (1,400 v 1,000) and earned higher revenue (USD 0.8m v. USD 0.3m); (vii) clubs with a written strategy for women's football tend to have higher average club revenue (USD 0.6m v. USD 0.3m), more facilities available to the first team and higher match attendances (1,400 v. 700); (viii) leagues that negotiate broadcast rights exclusively for the women's league generate, on average, USD 0.7m revenue from broadcast compared with only USD 0.1m for other leagues that do not; (ix) 72% of clubs reported that they negotiate some of their sponsorship contracts for the women's team only. On average, these clubs achieved a higher total revenue and sponsorship revenue; and (x) the clubs that generate the highest revenue (more than USD 1m) raise over half of it through sponsorship, compared to less than a third for clubs averaging revenue of less than USD 1m.

25. A traditional monetisation model for the football industry is often based on audiences, events, reach, and impressions, while a community-based monetisation model is driven by, for example, storytelling, conversations, access, and direct-to-consumer commerce. Understanding Scottish football communities better has the potential of developing a much more communities focused model that could unlock powerful new ways to produce, distribute, and measure football engagement and relationships based upon what fans and communities, including online communities want. Women's sports in the USA are driving this community-based monetisation model successfully¹².
26. 43% of viewership for the 2019 FIFA Women's World Cup came from digital channels (including those who watched on both digital and linear channels).

Data, Covid-19 and Scottish Women's Football

27. Women's football remains the single biggest growth opportunity for football today. A revamped Women's Champions League launches in 2021/2022 with UEFA promising to revolutionise the game with more teams, more matches, enhanced revenue from TV and commercial partners, increased UEFA investment and prize money, and a first ever cross-subsidy with the men's competition.
28. The same holds true for Scotland as it does for other countries. To help meet these expectations, there is a need for data to inform analysis not just on the financial and the commercial context, but also the governance structures, and many aspects of the professional/ semi-professional women's football ecosystem in Scotland.
29. The SFA social return on investment study reported that women make up 11% of the Scottish population playing football. The same report noted the increased participation

¹² See The Fan Project Report (2020). [How women fans will lead the sports industry into the future.](#)

and demand for football by women and girls in Scotland. Scottish Women's Football (SWF) owns and manages 66 competitions across Scotland including the SWPL.

30. The SFA 2021-2025 strategy notes 17,000 registered female players and has one of five strategic pillars as accelerating the growth of girls' and women's football¹³.
31. In 2018, the Chair of Scottish Women's football called for the game to be semi-professional within three years and that has been achieved. Celtic and Rangers became full-time professional clubs last season as they looked to challenge Glasgow City's dominance of the Scottish Women's Premier League. The 20-21 season concluded with Glasgow City securing a historic 14 successive SWPL title win. Add to these two Scottish representatives in the UEFA Women's Champions League and the historic qualification for UEFA Women's EURO 2017 and FIFA World Cup 2019, it is clear that Scottish Women's football is a very good news story for the SFA and Scotland.
32. In June 2021, the former MSP Aileen Campbell was appointed as the new CEO of Scottish women's football. On her appointment, she said that: 'I've always been passionate about girls' and women's sport, and I love football, so this is a perfect opportunity for me to continue to make a positive impact across Scotland'¹⁴.
33. The importance of fans to the business of Scottish women's football is self-evident, whether directly through their presence or indirectly as consumers (fan expenditure helps to drive women's football's revenue). The absence of fans during the Covid-19 pandemic has only reinforced the point that both the women's and men's game in Scotland has been significantly affected. Covid-19 had a significant impact on the competition calendar of women's football from both a club football and national-team perspective with a number of leagues and competitions having to operate a reduced format, postpone, or cancel matches altogether.
34. Glasgow City voiced concerns about the disruption to women's football in Scotland because of Covid-19. For Glasgow City, the postponement of the Champions League match against Wolfsburg meant the club lost out on the competition prize money and the revenue from the ticket sales of the high-profile event. The cancelling of the season has arguably had more impact on the women's game. With a budget, just a fraction of that enjoyed by Wolfsburg, competition, especially European, is a vital income stream for the Scottish clubs that qualify for UEFA women's tournaments. With the abrupt end to the 2019/2020 season, the inconsistent resumption of women's football¹⁵, along with other factors, has resulted in many sponsorship deals being put on hold due, in part, to a lack of regular football matches¹⁶.
35. The Glasgow City CEO noted: (i) that the nation's top female players were ordered to stop training and playing while Scotland's male Premiership and Championship clubs were allowed to carry on playing through the winter spike in coronavirus cases; (ii) that

¹³ See [The power of football strategic plan 2021-2025](#).

¹⁴ See <https://www.bbc.co.uk/sport/football/57416031>

¹⁵ BBC Staff (2021). SFA asked to release FIFA money earmarked for women's football. BBC Sport. 11 Feb 2021. [retrieved 14 April 2021].

¹⁶ Smith, R. (2020). Women's football was having a moment; then the clock stopped. NY Times. 11 April 2020. [retrieved 14 April 2021].

Scottish girls, more generally youth, were not getting the opportunity to watch their heroes; (iii) that the momentum from Scotland’s qualification for the 2019 FIFA Women’s World Cup could be lost; and (iv) that women’s football needed more of a voice in the key decisions regarding football’s response to Covid-19.

36. For many of Glasgow City's peers, the situation is substantially more complex. Women's soccer has boomed across Europe over the last decade, driven in part by improved performances by national teams, a growing interest in Women's World Cups, and an interest of major men's clubs in the women's game¹⁷. Many of the clubs have expressed hopes that the momentum gained over the last twenty years for women's football will not be affected by Covid-19. It has been a concern that the Covid-19 climate could lead to a lost generation of female players¹⁸ without the necessary steps being taken to address such fears.
37. The growth in women’s professional football in Scotland over the past five years has meant that we have gone from one or two professional players to more than 70¹⁹. There are currently 17,241 participants with numbers having grown 17% following the 2019 World Cup - the largest growth being among the under-seven to under-11 age group. The national aim is to increase participation and have more than 25,000 registered players by 2025²⁰.
38. One of the immediate data effects of Covid-19 was that the registration of players was impacted, given that annually players re-register. Thus, due to the pandemic in 2020, a lot of players did not register for clubs as there were no competitions. The potential number of professional players registering in a normal year might have been higher.
39. The early signs of growth are positive: for example, within U7-U11 activity, we can see (Figure 1) that in 2021, we are already exceeding 2019 figures across all individual age brackets before we reach the end of the registration period²¹.

Age	2019	2021
6 and under	30	336
7	72	429
8	139	632
9	279	811
10	484	965
11	698	1160
12	808	1069

Figure 1 Growth in Girls Football Under 12’s between 2019 and 2021
[Source: Scottish Football Association data 2019 and 2021]

¹⁷ Smith, R. (2020). Women’s football was having a moment; then the clock stopped. NY Times. 11 April 2020. [retrieved 14 April 2021].

¹⁸ PA Media (2021). Glasgow City chief Laura Montgomery thinks Scottish Women’s clubs is the Covid-19 climate could lead to lost generation of female players. Sky Sports. 18 March 2021. [retrieved 14 April 2021].

¹⁹ Goodlad, P. (2021). Hampden to be the new home of Scotland’s women’s team with 10% increase in pro players targeted. <https://www.bbc.co.uk/sport/football/57926179> .

²⁰ Goodlad, P. (2021). Hampden to be the new home of Scotland’s women’s team with 10% increase in pro players targeted. <https://www.bbc.co.uk/sport/football/57926179> .

²¹ Figures taken on 23 July 2021.

Sentiment & Network Analysis

40. The sentiment and network data presented below helps to provide insight into the social media Twitter traffic, content, and key narrative influencers during the final weeks of the 2020-21 SWPL season. The overall sentiment recorded was 10.84% negative; 47.3% neutral and 41.85% positive.
41. The data below tells us that the sentiment towards social media conversations about Scottish women's football was either neutral or positive.
42. It is important for clubs to know who their key influencers are to work with them on a regular basis in order to sustain a meaningful relationship. Key influencers, including online communities, are people who can and do influence the narrative around the club.

All SWPL Clubs Week 9 (n= 6730, users= 2298)

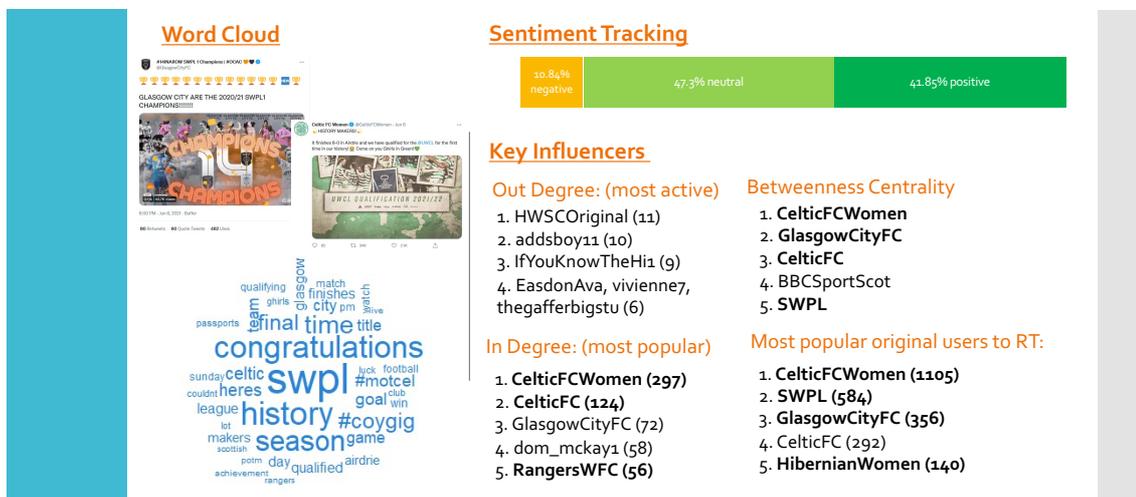
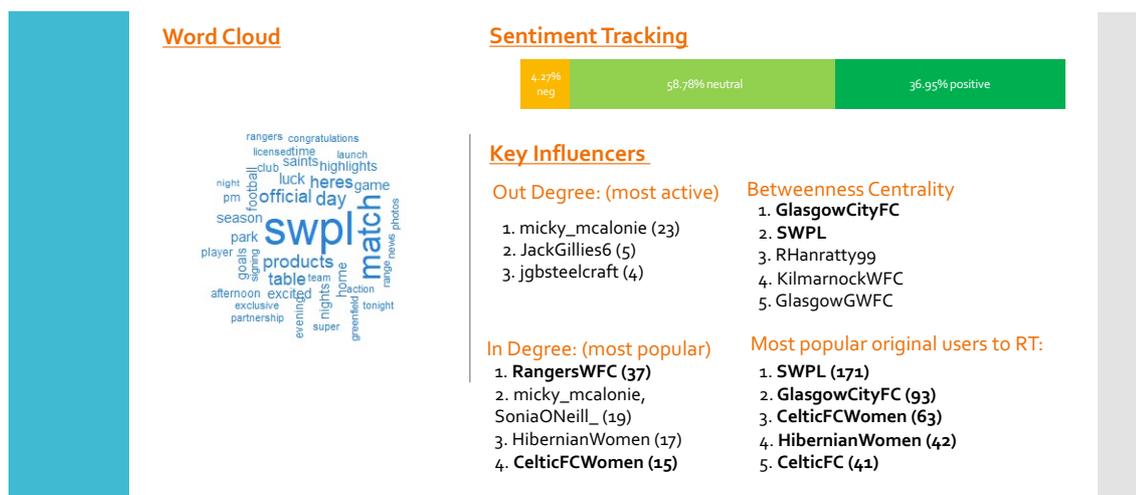


Figure 2 SWPL Sentiment Tracking Week Nine

All SWPL Clubs Week 10 (n= 1264, users= 614)



Overall engagement significantly decreased this week by about 5,500 tweets and 1600 unique users. However, despite drop, see increase in most active user micky_mcalonie with 23 tweets, compared to last weeks' top user's 11 tweets.

Figure 3 SWPL Sentiment Tracking Week Ten

43. The proportion of neutral sentiment towards women’s football remained generally constant over the eight-week period and was generally higher than the SPL average for the same period.

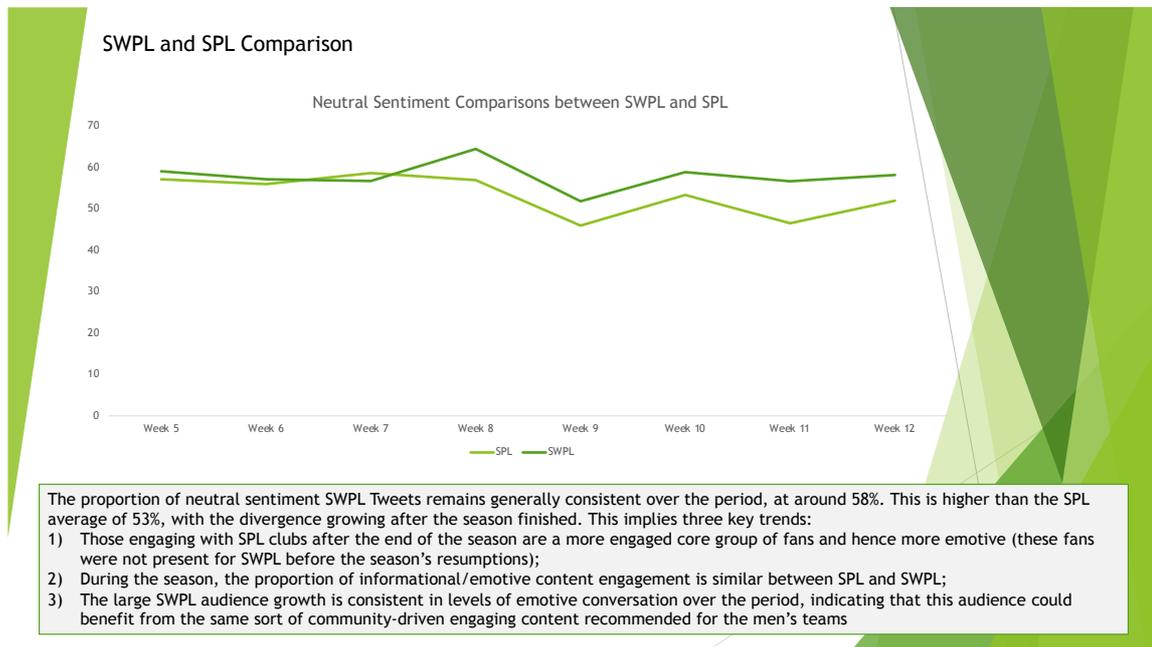


Figure 4 SWPL Sentiment Tracking SWPL and SPL Comparison

44. SWPL engagement (Figure 5) greatly increased during the period of study. The week with the highest engagement was Week 13 which included the final matchday of the season. As seen in the graph below, SWPL’s overall engagement steadily grew until this point (excluding Week 8 when a social media blackout occurred). SWPL’s Twitter engagement was susceptible to the post-season drop as the men’s league, as seen in Week 14 onwards.

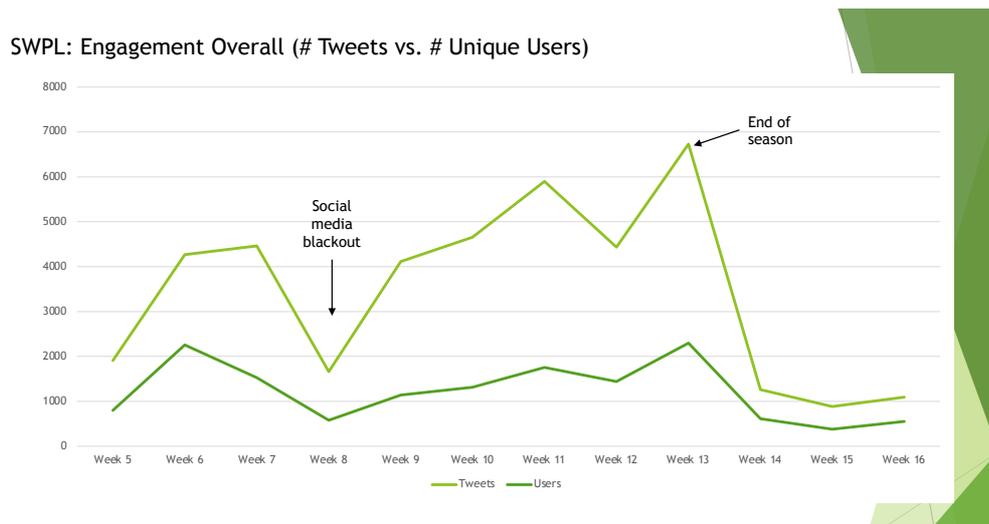


Figure 5 Twitter and Unique User Engagement over a 12-week Period

45. In terms of Tweets vs. unique users, there was overall less conversation happening than in the men’s clubs. However, the number of unique users stayed relatively constant while the number of Tweets grew during the season, signifying more activity and likely conversations occurring in the lead up to the end of 2020-21 season. Thus, there may

have been a slight shift from news/match results content to more emotive content as with the men's clubs.

46. Rangers and Celtic dominate overall SWPL engagement, followed by Glasgow City and Hibernian. The four other clubs receive much less engagement. As with the overall engagement chart, we can see a steady increase in engagement for the top four clubs (again, excluding Week 8's social media blackout), with a peak at Week 13 as Glasgow City fought off a title challenge from Celtic. Despite the top four clubs' high and growing levels of engagement during the season, Glasgow City, Rangers, Celtic, and Hibernian were still susceptible to post-season drop.

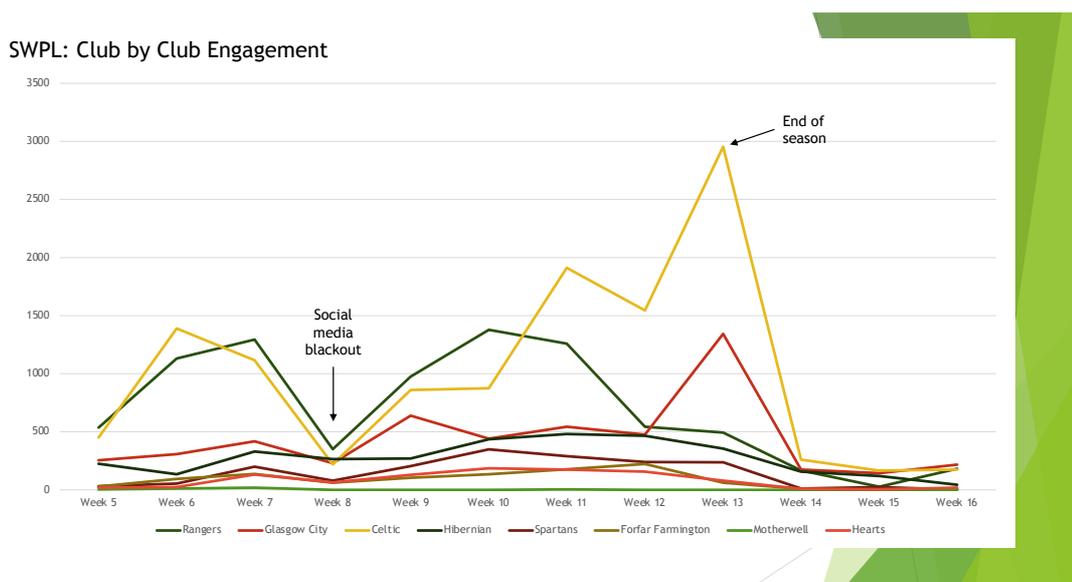


Figure 6 Weeks 5-16 Volumes of Engagement

47. While varying volumes over the period indicate growing interest in the game (from 2000 in Week 5 to 5000/week across Weeks 10-12), sentiment remained markedly consistent. This is because content for the SWPL was largely informational, with match announcements and commentary generally dominating conversation. Towards the end of the 2020-21 season, content was promoted by the corresponding SPFL accounts, leading to a boost for Celtic and Rangers above league winners Glasgow City. This did not translate into shifts in sentiment (see e.g., the Week 11 derby, with minimal impact on sentiment) as content remained informational. Growing audience volumes imply that the audience may be engaged in a more meaningful way, with similar recommendations to the men's clubs (i.e., more community-driven conversations).
48. In terms of the end of season, there was a slight upturn of positive and negative sentiment (likely reactions to the last match). Post-season, positive sentiment has grown, for instance with Rangers announcing a new kit in Week 16. This shows just one example of how clubs can engage with fans post-season to grow conversation, albeit Week 16 engagement volumes remained low.

SWPL: Sentiment Overall

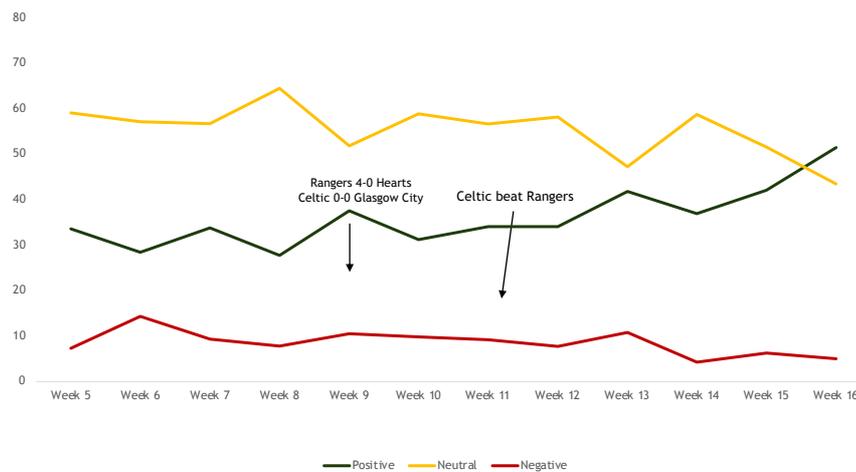


Figure 7 Overall Sentiment

Recommendations and Observations

49. The need to remain flexible, innovative, agile, and responsive is an observation from the pandemic that holds true for both the men's and women's football in Scotland.
50. A recent sports innovation report talks of a fluid landscape and the age of the fluid fan. New fans joining the football family are an important avenue of growth for the women's and men's football industry²².
51. Some of the top football clubs in the world have several things in common. These include expanded revenue opportunities beyond gate revenues and traditional broadcasting income and organisational agility and knowledge with skills that reach beyond back-office sponsorship, sales, and event management.
52. Furthermore, an investment in strong partnerships aligned with digital technologies can support emerging fan behaviours.
53. Maximising successful global digital sports platforms requires traction of all the major social media platforms — Facebook, Instagram, YouTube, Twitter, TikTok, Weibo and more, along with traditional broadcast outlets. Rather than creating one piece of content and posting it to every platform, content should be tailored for each specific platform in the way users consume their content. These decisions should be based on women's fan engagement data that is analysed by the club social media team/data analytics team
54. One of the immediate ways this can be supported is in using data-driven information and innovation specifically targeted at helping football clubs better understand their business and the attitudes of their fan base. The football industry must see this Covid-19 period as one of reflection, whilst so called legacy fans may always be loyal, there

²² Sports Innovation Lab Report (2021). The top 25 most innovative teams in the world. January 2021.

is an opportunity to engage with both old and new fandom, through advanced data analysis and computational methods.

55. Data from American women's sports tell us that brand affinity can jump to over 100% for those who sponsor women's sports. Key aspects of increasing fan engagement with women's football in the USA have been (i) *Storytelling*: fans of women's football in the USA have increasingly engaged with content both in- and out-of-season; and (ii) *Purpose-led conversations*: women's sports putting their values on display and engage/ buy based on how brands/ media/ teams/ athletes align with those values. Women athletes and fans want to engage with the social issues of the day. Societal topics drive conversation but also increase viewership.
56. Meaningful social media engagement with fans could be more of a 365-day operation and more could be done to engage with fans during what can be seen as quiet periods, when matches are not being played or post-season.
57. It is important for women's (and men's) football clubs to build strong relationships with key influencers within their fan networks and beyond. *Key influencers* refer to those individuals who have a substantial following and/or act as critical connectors between users on social media. They represent individuals in each of the clubs' communities that are highly central and visible. They represent those with high levels of social capital in the network and are an essential component of the success and adoption of any marketing communication.
58. As Scottish women's club football becomes more international in the composition of clubs, this provides untapped opportunities for increased international engagement with countries.
59. Building a global digital footprint requires an active presence in countries with different languages and cultures. While fans in all countries may understand the sport, telling athlete/women's football stories requires local language — using a community manager and media partners who can deliver the content in that language are key.
60. The way in which player profiles can be used to enhance club profiles remains a work in progress.
61. The opportunity for football clubs and the sports industry in general to gain insights through the sharing of data remains an untapped opportunity not just in football, but also within and between sports.
62. Collectively, this project validates the need for an independent Scottish Football/Sport Data Laboratory, which would use data to maximise the potential of Scottish football/Sport Industry²³. This would also help to close a data gap between men's and women's sports.

²³ One of the additional outputs from this project was the creation of a matrix of Scottish data sources that would support data driven decision making in Scottish sport.

Micro Briefings: Building Back Better, Data Driven Innovation and the Scottish Football Industry.

The Academy of Sport in partnership with the Bayes Centre have developed a series of micro briefings written in collaboration with partners from the Scottish Football Industry. They are intended to inform and contribute to enhancing the capability of Scottish football to learn from the Covid-19 pandemic and embrace the possibilities of how data-driven decision-making, innovation and sharing can support, for example, business data analysis and off-field data analysis.

It is envisaged that other micro briefings on Scottish football would include international engagement through football; social and demographic analysis of football season ticket holders; bespoke briefings for individual football clubs supporting the project; Scottish football building back better from Covid-19 and more.

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